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Research Title: An Exploration of Ugandan Local Content Adoption and Development in a
New Oil and Gas Operating Environment

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Abstract:

This study investigates the adoption and development of local content in Uganda's oil industry. The focus is the impact of lower oil prices on evolving stakeholder commitments and involvement in developing local competencies and, in turn, their impact on the industry's adoption of local content. In investigating movements and trends towards a more localised oil industry, this research assesses the three criteria of employment, procurement and local content development.

This study is designed around the notion that there are multiple stakeholders who, to varying degrees, play a role in the development of local content. Stakeholders include, but are not limited to, the Government of Uganda, operating companies, donor agencies and international oilfield service companies. Acknowledging that not all of the aforementioned stakeholders employ or procure from the local value chain, this research analyses trends and motivations of stakeholders to understand their role in local content adoption and development.

The findings of this research reveal that the collapse in the oil price between 2014-2016 engendered incremental movements towards a more localised oil industry as operators increasingly employ and contract Ugandan labour and suppliers. In the period since 2014, we can also observe that a growing number of stakeholder interventions, notably from international donors, has created 'pockets of effectiveness' in education and training, which, in turn are playing a major role in delivering requisite skills for the next stage in Uganda's oil and gas project lifecycle. The study finds that Ugandan state interventions have been limited in their effectiveness, undermined by an underfunded and ill-functioning bureaucracy and a neglected education system. Resultantly, non-indigenous stakeholders have been integral to the development and adoption of local content in Uganda.

Keywords: Oil and gas, Uganda, Local Content, Localisation, Nearshoring, Capacity Development, Oil Price Crash, Museveni, Political Economy, Institutions, Tullow, Total, CNOOC, Oranto, China in Africa, Donor Interventions

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(ii) Glossary of Terms and Abbreviations

CB&I: Chicago Bridge & Iron Company

CNOOC: China National Offshore Oil Company

DFID: Department for International Development (UK)

E&P: Exploration and Production

EPC: Engineering, Procurement and Construction (Contractor)

FID: Final Investment Decision

FCDO: Foreign, Commonwealth and Development Office

GIZ: Deutsche Gesellschaft für Internationale Zusammenarbeit (German Development Agency)

GoU: Government of Uganda

HSE: Health, Safety and Environment

IFI: International Financial Institution

IOC: International Oil Company (privately owned and operate globally such as Total E&P)

LCD: Local Content Development

MEMD: Ministry of Energy and Mineral Development

MGLSD: Ministry of Gender, Labour and Social Development

MNC: Multi-national Corporation

MOES: Ministry of Education and Sport

MTIC: Ministry of Trade, Industry and Cooperatives

NCHE: National Council for Higher Education

NOC: National Oil Company

OECD: Organisation for Economic Co-operation and Development

OAG: Office of the Auditor General

PAU: Petroleum Authority Uganda

PEPD: Petroleum Exploration and Production Department

PSA: Production Sharing Agreement

SME: Small and Medium-sized Enterprises

SOE: State Owned Enterprise

TEPU: Total E&P Uganda

TUOP: Tullow Oil plc

TVET: Technical and Vocational Education and Training

UNOC: Uganda National Oil Company Limited

New Operating Environment: The new context for global oil operations, broadly characterised by less stable oil prices and the politicisation of supplies.

Operator: An operator is an oil and gas exploration and production company which is licensed to manage and undertake upstream operations such as Tullow Oil, Total E&P and CNOOC.

Localisation: A concept of a more localised industry, in which workers and sector inputs are predominantly local.

Local Content: In this study local content is defined as employing and procuring from the indigenous value chain.

Local Content Development: The process of enhancing indigenous capacity, both human through education and training, and supplier through initiatives to develop local businesses.

1.0 Chapter 1: Introduction

This is a study concerning local content and its development in Uganda's nascent oil and gas industry, with particular attention given to the impact of plunging oil prices in 2014, which bottomed out in early 2016. Research shows us that nations with higher levels of local content¹ accrue greater benefits from the industry and have a better chance of creating and maintaining sustainable and inclusive economic growth (Gbegi & Adebisi, 2013; Mifsud-Bonnici, 2013; Sigam & Garcia, 2012). Resource industries throughout the Global South, if leveraged appropriately, can have a transformational impact in enhancing growth and job creation. Local content is, therefore, a considerable and credible objective for any resource endowed nation and its government; a position that has been long professed, in one form or another, by academics and policymakers alike.

This study contends that lower and less stable oil prices since 2014 and the ongoing politicisation of oil supplies collectively represent a new oil and gas operating environment. In turn, this new environment for oil and gas operations has engendered a series of external influences on operators that are economic, political and social. Economic pressures largely revolve around ensuring oil operations remain financially viable while political pressures include host government policy and lobbying which seeks to increase in-country value in light of decreasing oil revenues. In addition to economic and political pressures, social pressures, notably the desire of the local community for employment and opportunities for local suppliers have also been heightened, intensified by reduced operator spending on Corporate Social Responsibility (CSR) projects and the knowledge that fiscal windfalls from the industry will be less than anticipated. This study believes that, collectively, these pressures demand greater attention to local content development and its adoption by the oil industry. However, higher levels of local content are only possible in the presence of requisite local capabilities, a recurring challenge in almost all nascent hydrocarbon producing countries.

¹ Local content is also referred to as national content or local participation. In Uganda, the term national content is popular

The observation that there are now multiple stakeholders involved in local content development stands as a premise for this research and is something that stems from my personal work, delivering conferences on the topic of local content in oil and gas which brought together stakeholders from across the world. This observation, that international organisations such as oil and gas operating companies, donor and development agencies, oilfield service companies and other contractors are actively involved in the development of local competencies, marks a distinct shift from the previous paradigm which saw minimal compliance with local content regulation by operators and little or no interest from donors in indigenous capacity development projects for oil and gas (Andrews and Playfoot, 2015; Pegram, 2018). Traditionally, as we can see from Andrews and Playfoot (2015), broad-based local content development has been a burden largely shouldered by the host government, whilst individuals fortunate enough to find work within the operating and oilfield service companies are likely to receive training, to varying degrees, from their employers.

Resultantly, this research has been designed to investigate an underexplored topic. It is apparent that very little research has been published concerning the roles and interactions of stakeholders in this new, multi-stakeholder environment and most importantly, no evidence as to whether it is engendering improved development outcomes. Existing studies such as Andrews and Playfoot (2015), Pegram (2018), Pegram et. al. (2020) and Hilson & Ovadia (2020) are situated within this new paradigm but either focus on specific areas such as workforce localisation (Pegram, 2018) or don't address the topic head on. However, it is not only the interaction between stakeholders which is unobserved; very little is known about the factors that are motivating stakeholders to play a role in local content development, particularly those, such as donor and development agencies, who will not seek to employ or contract local content in the future. Consequently, this study explores these motivations and examines what engendered the movement from the previous paradigm to this multi-stakeholder environment. Furthermore, despite various espousals from operating companies that lower oil prices incentivise a more localised business model, there is little existing research that validates/supports this notion. Likewise, despite a number of

governments very publicly championing local content, Uganda's President Museveni included (Hickey & Izama, 2017), there is a dearth of literature demonstrating the impact of this enhanced state interest in local content beyond the creation of a regulatory environment.

The case study of Uganda's nascent oil and gas industry was the chosen research methodology for this work. This study was undertaken using a mixed methods approach and a sequential explanatory design, with two questionnaires being distributed in June and September 2019 and a series of interviews taking place between June and August 2019. Given the variety of engaged parties and the importance of political and economic factors in local content, a political economy lens was chosen through which to analyse, interpret and engage with the obtained data. The research findings are presented in three chapters (5, 6, 7), and address the attitudes, changing motivations and effectiveness of stakeholders and their interventions in actualising a more localised industry as Uganda prepares for the development phase of the oil and gas project lifecycle.

1.1 Research Premise: Converging Objectives

The premise for this research revolves around the relationship between the two main groups of stakeholders in oil and gas production. These stakeholders are the governments of resource endowed nations and oil and gas operators. Both groups continue to engage in agreements that see oil and gas production around the world under the assumption that both parties will benefit from this economic activity. However, numerous prophetic examples have demonstrated that this assumption is conditional. The following sections highlight the historical assumptions of resource production and the premise that all parties will only truly benefit from the oil industry if certain conditions are met.

1.1.1 Resource Endowment: An Unqualified Blessing for Resource Endowed Nations?

The pre-war era consensus assumed that resource endowment was an unqualified blessing to the nations that controlled them (Gelb, 1988). This notion was maintained by a number of academics in the post-war era (Viner, 1952; Lewis, 1955; Higgins, 1968) and was furthered by Rostow (1961) who, among others, contended that resource endowment was an enabler for underdeveloped nations to industrialise. However, the post-war era demonstrated that many resource rich nations were developing at a slower rate than their resource poor counterparts (Sachs & Warner, 1995, 1997, 1999, 2001; Strauss, 2000; Gylfason, 2004; Mehlum et al., 2006). The term the 'resource curse' (Auty, 1993) was eventually coined to characterise the relationship between resource abundance and a series of negative outcomes, including conflict, authoritarian rule and poor economic growth. This was nowhere more apparent than in sub-Saharan Africa, where many nations, newly independent, were embracing long-awaited self-determination. In the post-war period only one resource endowed nation, Botswana, successfully translated its endowment into sustainable economic growth, a fact that Acemoglu and Robinson (2012) attributed to sound, 'inclusive' institutions of government while Poteete (2009) notes the strength of Botswana's political coalition and its adoption of pro-growth policies and institutions.

Natural resource endowment has proven to be anything but an unqualified blessing. Instead, we can observe that growth, and more specifically inclusive growth, is conditional and reliant on linkages into the wider economy as well as sound resource governance. Whilst some states pursued wholesale nationalisation agendas in order to maximise all forms of linkages, the quality of governance and institutions features frequently as the explanatory variable for contrasting observations and outcomes; commentators have frequently made comparisons between Botswana and Nigeria, the latter being the most prominent exemplar of poor resource governance. However, whilst institutional quality remains part of this thesis, in echoing the sentiments of academics such as de Sa (2013), Andrews & Playfoot (2015) and Ovadia (2016), I contend that local content, defined by the employment and contracting of local people and companies in the oil industry, is the principle vehicle for generating wider and inclusive economic development in nascent resource economies. In frontier markets such as Uganda, actualising local content objectives represents a considerable challenge.

1.1.2 Oil Companies and Localised Operations

Localising oil and gas operations, in turn, is also reliant on the willingness of the operating companies and their partners to employ local people and contract local suppliers. However, operators have, traditionally, demonstrated that local content is not integral to the profitability of oil and gas operations mainly due to its absence, notably in frontier markets, where the development of local capacity must precede its adoption. Authors have noted that when local competences are questionable, foreign investors and international companies have often presented a rational argument in favour of employing expatriates (Dowling & Schuler, 1990; O'Donnell, 2000). The risks of employing inexperienced, incompetent and under-qualified people can have a devastating impact on the environment and human life in the event of a disaster, as well as impacting the reputation and finances of operators (Wilson & Kuszewski, 2011). Oil and gas companies therefore are notoriously risk averse when it comes to recruitment, succession planning and contracting.

In contrast to the national objective of actualising greater levels of local content, Andrews and Playfoot (2015) note that operators have, traditionally, pursued the minimal level of compliance possible to maintain their licence to operate, most notably in underdeveloped or frontier locations. In the absence of local competencies and inadequate national education and training infrastructure, even in mature markets such as Nigeria in the early 2000s, greater Job Role Localisation (JRL) and broader supply chain localisation can appear costly and potentially unobtainable. As such, localisation rarely represented an economic objective of the operator community. However, more recent observations, particularly from my own work at Getenergy where I delivered conferences on local content agendas within oil and gas, highlighted that, in light of lower oil prices, the end of 'easy oil' and increasing host government pressure, operators were increasingly vocal about localising their operations; this notion is supported by the recent work of Pegram (2018).

1.2 Thesis Objectives

This thesis was designed to address a disparity between existing literature and my observations of real-world local content development and adoption in the oil and gas industry. Concurrently, this work also asks whether the political economy of Uganda's oil and gas industry is positive for the realisation of development goals through the prism of institutional theory. The qualitative and quantitative data is triangulated with published and provided data such as employment figures and procurement data allowing for trends to be observed. While resource curse literature highlights that oil and gas industries have often been associated with several dire economic and political consequences, my thesis is broadly based within the understanding that a localised oil industry can be a vehicle for economic development. The specific objectives are:

1. Investigate the nature of multistakeholder involvement/engagement in the contemporary environment of a nascent petroleum-producing economy
2. Analyse the circumstances that the oil price crash of (give date) engendered greater adoption of local content by international oil and gas companies
3. Uncover how the political economy of an oil and gas producing country impacts local content development

My study's findings are delivered in three chapters; Chapter 5 presents results from analysing the attitudes of operators and other international stakeholders towards local content in Uganda. The second looks at the oil price crash as an event that engendered greater adoption of local content. The third looks at Ugandan stakeholders, notably the state, as a partner in developing and adopting local content in line with the government and people's expectations.

1.3 Methods Overview

This work adopts the pragmatist research paradigm and an abductive approach, utilising both qualitative and quantitative methods to best answer the research questions stated in

Chapter 2 subsection 2.7.3. The pragmatist research paradigm permits the use of both qualitative and quantitative methods in a way that grants the investigator the tools to best answer their research questions, while the abductive approach allows the researcher to go back and forward between research methods, with one phase informing the development of the next. The thesis is based on a single case study, Uganda's oil industry, as it was deemed appropriate for in-depth research, allowing for the identification of trends and patterns, which in turn can be generalised to deliver relevant and transferable findings.

The design of the study consisted of an initial questionnaire with relevant stakeholders, an interview phase with a smaller group of individuals and a final, more focused, questionnaire. As is the way with the abductive research approach, each phase of data collection informed the development of the next data collection phase. Significant time was put into transcribing recordings from the interviews. Interview data was analysed using NVivo software while survey data was analysed using the Jisc software it was disseminated on. Statistical tests were carried out in order to ascertain P-values, analyse variances in participants' responses and measure how responses vary across organisational subcategories.

1.4 Thesis Structure

The main aim of this thesis is to thoroughly investigate whether this new environment for oil and gas operations has emerged and in doing so provide an in-depth understanding of the roles and motivations of different stakeholders in local content adoption and development. This thesis consists of eight chapters, including three chapters in which my research findings are presented. Chapter 2 of this study delivers a review of the relevant literature to date, highlighting not only the extensive work on linkages and other overlapping topics but also the dearth of research into local content adoption and its development in a multi-stakeholder environment. Chapter 2 also analyses institutionalist political economy theory which is the chosen theoretical framework for this work; the chapter discusses how institutionalist theory aims to make research findings more meaningful and acceptable in the research field and ensures generalisability. The chapter concludes by presenting the research questions for this study. Chapter 3 presents the methodology used in undertaking

this study whilst Chapter 4 delivers context on the case study, making the research findings more digestible and comprehensible.

Chapters 5, 6 and 7 deliver the research findings: Chapter 5 assesses the commitment and motivation of non-indigenous stakeholders to local content and its development; Chapter 6 investigates the role of external pressures on non-indigenous commitments to local content and its development whilst Chapter 7 looks at the role of Ugandan stakeholders in developing local content as well as mandating and championing its adoption, focusing on Museveni's leadership, the civil service and academic institutions. Chapter 8 delivers this study's conclusions.

2.0 Chapter 2: Rethinking Value Creation

There are a number of bodies of literature that focus on value creation and local content which need to be viewed collectively to identify research and theoretical gaps. Building on the notion that resource endowment has proven to be anything but an unqualified blessing, studies of value creation and local content in oil and gas are largely situated within this resource curse literature. Grossman (1981) was the first academic to introduce research on local content into the wider body of literature on resource economies. However, several contributions to the concept of indigenous participation and local value creation were made considerably earlier, with Hirschman's (1958) work on linkages being seminal. Hirschman's work, like many of his contemporaries, was framed by the context of the post-colonial era, addressing questions pertinent to the economic development of new nations. As such, local content literature is inextricably linked with the era in which it was written. In this chapter, existing literature will be critically assessed for its relevance in the contemporary era and pertinent parts extrapolated to inform this study's conceptual framework.

A finding arising in this chapter is that local content as a shared objective of multiple stakeholders is underexplored. This notion that the topic is poorly investigated in literature contradicts my own professional observations. When I was responsible for facilitating conferences and meetings around the world that brought stakeholders together to partner around local content, I came across a considerable number of individuals who were very much aware of this multi-stakeholder environment and were themselves players within it. A broader critique of contemporary literature is the focus on institutional quality as the key determinant of successful resource governance; measures to increase institutional strength and the transparency and accountability of governance, for example, do not cover dynamic and proactive practical interventions, such as the creation of vocational and technical schools, that governments undertake to ensure develop local content and improve its adoption. Considerable works on the role of the so-called 'Norwegian Model' for resource governance reflect the predominance of literature focusing on institutional strength. Whilst the model points to interventions such as the creation of sovereign wealth

funds, which in some cases like Ghana, are active in developing local capacity, institutional quality itself does not develop or encourage the adoption of local content. This chapter also finds that whilst there is substantial literature focusing on value creation for the host state, existing literature largely omits any positive relationship between oil companies and local content, suggesting that oil companies themselves have little involvement in local capacity development and its adoption. In turn, this means that there is little understanding of what the complete local content picture looks like as the roles and interactions of multiple stakeholders, including governments, oil operators and international donors, have not been viewed collectively or, in some cases, investigated comprehensively. Resultantly, there is little grounded understanding about the political economy of local content.

As we progress from Hirschman's original contributions in the 1950s to more recent works, we can observe an evolution in the approaches to value creation and local content, frequently tied with the economic and political trends of the era. The first six sections of this chapter examine existing literature broadly concerning value creation and local content, primarily within oil and gas but more broadly within resource industries. Firstly, I consider the theoretical contributions, notably linkages, which form the basis of local content as a body of literature, whilst the second section looks at literature concerning nationalisation which some academics (e.g. Ross, 1999) contended would satisfy the requirement for linkages and local content. In building on this, the third section looks at good governance and the exportability of the so-called Norwegian Model, a model which is based upon the separation of administrative functions, reflecting the importance of institutional quality, bureaucratic capacity and certain revenue management interventions. It is important to note that this Norwegian administrative model has been implemented in Uganda, and therefore makes a useful case study to examine the relationships between institutional quality and the implementation of measures which are directly designed to achieve local content objectives. Heller and Marcel contend that more research is needed to understand the impact of implementing administrative models in new resource 'hotspots' which have low levels of existing institutional capacity, including an "examination of how political factors affect the governance outcome under different institutional models" (Heller and Marcel,

2012, p. 37). Sections four and five address literature regarding the practical means of local content creation. Section four assesses Local Content Policy (LCP) whilst section five explores literature on local content from the perspective of the operators. The first part of this chapter concludes by providing an overview of the perceived literature gaps.

Section seven of this chapter highlights my use of the political economy lens and institutional theory to frame this research. Whilst underlining how institutional political economy theory is relevant to my study, I also look to highlight how this research contributes to the aforementioned theoretical lens. The final section outlines my research hypothesis and questions while highlighting why this angle of investigation has been chosen.

2.1 Early Theoretical Interpretations of Local Content

Key concepts:

A review of the early literature on local content reveals three key concepts as essential for developing a useful interpretation of local content in this thesis, namely, linkages, leading sector (or sector focus) and resource enclave. Definitions based on review of key literature, notably that of Hirschman.

Linkages – An economic link between one sector and other parts of the economy, primarily backward and forward. A forward linkage involves investment in subsequent stages of production while a backward linkage involves indigenous inputs into the sector.

Leading sector – Industries with the greatest complementarities, i.e., the number of possible forward and backward linkages. These are deemed potentially beneficial for economic growth.

Resource enclave – The notion of a resource industry existing without any or many linkages to the indigenous economy. This is deemed negative for economic growth.

The concept of linkages is one of the most valuable contributions to local content literature and provides a theoretical basis for local value creation which is as relevant today as it was when it was written in 1958. Hirschman's (1958) espousal of 'Unbalanced Growth' and linkages represented seminal contributions to the literature on local value creation and local content. Whilst colonial practices had often focused on the development of extractive institutions (i.e. institutions that sought to expatriate resource revenues), the fall of colonial powers brought about a new, nationalist and, in some countries, socialist approach to development economics.

Significant linkages can offer some degree of a remedy to the macroeconomic challenges of Dutch Disease and 'enclave economics'. The Dutch Disease (The Economist, 1977) refers to a macroeconomic phenomenon whereby the causal relationship between the increase in the development of a specific sector (for example natural resources) causes a decline in other sectors across the economy (such as the manufacturing sector or agriculture) due to factors including real exchange rate appreciation and the 'resource movement effect' (demand for labour away from lagging sectors). Meanwhile, 'enclave economics', often attributed to Singer (1950), characterised post-colonial dependency relations in the underdeveloped and developing world whereby foreign firms dominated export-based industries (particularly resource sectors) with minimal linkages into the domestic economy. Both these macroeconomic phenomena make it imperative that the state and its people benefit from the potentially lucrative resource industry and maximise in-country value.

Hirschman's work can be seen as an early contribution to the developmental state literature. He contended that in the emerging interconnected world, developing nations must take an unbalanced approach to their economic growth, focusing on a group of key sectors and creating strong linkages from these sectors into the wider economy. Hirschman believed that increased production of one good or service builds up demand for the second good or service, which was termed a complementarity. As such, resources should be concentrated into industries with the greatest total of linkages and complementarities; these industries were termed leading sectors. By encouraging the state to support the development of certain sectors, Hirschman advocated interventionist governance.

Identifying leading sectors and promoting linkages can be difficult in a globalised era, particularly within customs unions such as the European Union where there are rules against protectionism and state aid to develop nascent industries. However, protectionism and import-substitution industrialisation (ISI) remain common outside of Europe; it is also the case that state support and protection for nascent resource industries was and is widespread. This protectionism often takes the form of regulation and legislation as in Uganda, or in some cases has led to nationalisation like Iran.

2.1.1 Linkages and Resource Industries

Specifically of interest to this case study, Hirschman believed that in the context of resource dependency, particularly in low-income economies, linkages from the commodities sector provided a path for industrial development and economic diversification, noting that “development is essentially the record of how one thing leads to another” (Hirschman, 1981, p. 75). Linkages also provided a satisfactory theoretical approach to counter ‘enclave economics’. In turn, as we will see in the next section, the concept of linkages provided material for socialist writers of the 1960s and played an important role in the nationalisation agendas of the OPEC era.

Hirschman’s espousal of the value of fiscal, consumption and production (forward and backward) linkages can be seen as a valuable contribution to the concept of local value creation. Through backward and forward linkages, I believe Hirschman’s theory offers a remedy to the macroeconomic phenomenon of Dutch Disease and ‘enclave economics’. The notion of fiscal linkages (more frequently referred to as resource rents) and consumption linkages (how the resource rents are spent) have provided ample material for academic works on resource governance, however, Hirschman’s production linkages represent an early foray into local content and its necessity in developing resource economies. He believed that fiscal linkages alone would be insufficient to deliver any meaningful economic growth, adding that the “ability to tax the enclave is hardly a sufficient condition for vigorous economic growth. For the fiscal linkage to be an effective development mecha-

nism, the ability to tax must be combined with the ability to invest productively” (Hirschman, 1981, p. 68–69). Production linkages, or more precisely forward linkages (subsequent stage of production, e.g. processing) and backward linkages (demand for inputs, both labour, goods and services) can provide economic opportunities into the wider economy but can represent a complex challenge for the governments of resource producing economies. Fiscal linkages are a simpler relationship between the process and the outcome in which there is little need for government involvement unless some type of fraudulent behaviour is observed. In many cases throughout the 20th century, production linkages did not develop organically from resource enclaves. In reflecting a more institutionalist theory of development, creating backward and forward linkages often requires government intervention and operators that are willing to localise their workforces and supply chains.

As mentioned, the idea of leading sectors being resource industries conflicts with the notion that commodity enclaves are detrimental for economic growth (Singer 1950). Kaplinsky et. al. (2011) concur, attributing the failure to create strong links, primarily backward linkages, to the inherited wisdom that the commodities sector is an enclave activity. Singer’s (1950) contributions on commodity enclaves (primarily hard commodities), affirmed this inherited wisdom, suggesting that the hard commodities sector was characterised by simple technological procedures, limited learning opportunities, and diverted scarce entrepreneurial activities and domestic investment away from more beneficial manufacturing sectors. He contested, as corroborated by Seers (1964) and Baldwin (1996), that linkages from manufacturing, as opposed to resource production, lead to a more complex and diverse labour force, which in turn is more conducive to inclusive economic development. Singer’s comments reflect general observations of the early post-colonial era, because, after all the ‘big story’ of the post war era was not in the resource endowed nations, but the east Asian nations, such as Taiwan, Japan and South Korea who abandoned a strongly self-sufficient industrial policy in favour of an economy based on manufactured exports. This was often reinforced by substantial state intervention, or a dirigiste approach, to ensure comparative advantage. Arguably and as noted by Kaplinsky et. al.

(2011), this is the inherent wisdom of the post-colonial era that has blighted further development of backward linkages.

Foreign dominance in native resource industries presents a challenge to Hirschman's argument that resources sectors could stimulate economic growth through linkages. Ross (1999) concurred with aspects of Hirschman's early writing, noting the more contemporary consensus that resource industries were unlikely to stimulate growth in the rest of the economy, particularly if foreign multinationals dominated resource extraction and were able to repatriate their profits instead of investing them into the host country; this would be further exacerbated if the foreign operators failed to engage with the local workforce and supply chains. As such, resource exporting nations would be left with booming resource enclaves that produced few forward and backward linkages to other parts of the economy. This theory is well explored and supported in Corden's (1984) work. In the mid-1900s, many newly independent nations failed to develop these linkages and perhaps resultantly, reflecting broader political trends, nationalisation gained prominence as the remedy to stunted economic growth in resource rich nations. In avoiding the resource curse, authors such as Baran (1957) and Dos Santos (1968) believed that in many cases of resource dependency, nationalisation would finally settle the problem of linkages and deliver the desired levels of local participation.

In summarising the relevance of the early theoretical contributions, the core principles of linkages and the necessity to develop economic linkages beyond purely fiscal ones are as relevant today as they were in the 1950s. Whilst the notion of unbalanced growth as a vehicle for economic growth is at odds with literature on 'enclave economics' and Dutch Disease, I believe the notion of linkages is incredibly important in highlighting the role resource industries can play in inducing demand for services and labour in the rest of the economy. As such, a key component of this thesis is the notion that linkages from the resource sector, in this case study the oil and gas industry, into the wider economy is a requisite for maximising the possible benefit of the sector to the nation as a whole. The oil and gas industry can be a leading sector for Ugandan growth providing it avoids becoming a resource enclave.

Significant linkages may also represent a solution to the aforementioned macroeconomic challenges and engender economic growth. As previously discussed, the operating environment for resource exploitation has changed significantly since Hirschman's first espousal of the requirement to develop strong linkages. The majority of these changes have been positive for the pursuit of local content, such as the departure of the "inherited wisdom" that a localised oil industry would divert human resources and entrepreneurship that could be better utilised in other industries and, as this study proposes, the increasing willingness of operators to engage in localisation projects. However, prior to this realisation, the concept of nationalisation grew to prominence as the primary means of maximising in country value.

2.2 Nationalisation and the OPEC Era

Key concepts:

A review of the literature on nationalisation reveals two key concepts as essential for developing a useful interpretation of local content in this thesis, namely, nationalisation itself, and the national interest. Definitions based on review of key literature.

Nationalisation – The process of bringing, in this case the oil and gas industry, under state control.

National interest – Employing the nation's oil reserves to serve multiple national needs, including guaranteeing oil supplies, providing jobs, and increasing revenues for state spending.

Emerging from the realisation that resource economies were not an unqualified blessing, the concept of 'enclave economics' became prevalent in the 1960s and 1970s through the work of notable socialist economists Baran (1957) and Dos Santos (1968). At the height of the 'Third World's War' (Ferguson, 2011), the trajectory of socialist movements across the

developing world met with the growing sentiment that International Oil Companies (IOCs) were extractive institutions of capitalism and provided little for the local economies. As such, the late 1960s and 1970s saw a number of nations, like Algeria in 1971 and Iraq in 1972, move to nationalise oil supplies in order to create an industry that would work in the national interest. The rise of the National Oil Companies (NOCs) in this era saw the balance of power readdressed, as IOCs lost their global dominance over hydrocarbon supplies and national actors emerged to take their place, further reinforced by the creation of OPEC (The Organization of the Petroleum Exporting Countries).

Resultantly, the challenge of ‘enclave economics’ was remedied through the nationalisation process. Instead of foreign operating companies acting as extractive institutions, expatriating profits and using their international supply chains and labour, indigenous companies could, in theory, be utilised to turn resource wealth under the ground into economic growth. Nationalisation, a form of protectionism itself, could satisfy the need for significant linkages. Importantly, over time, the nationalisation approach to resource governance has become less common as nations in the 21st century favour a more pro-business agenda (Ovadia, 2016). Resultantly, in some cases, it appears that nationalisation has not been an effective vehicle to maximise in-country value.

The aims of nationalisation can include objectives beyond the development of Hirschman’s linkages. The ‘national interest’ is an enduring pillar of nationalisation which often encompasses wide-ranging objectives. Contributions to defining the national interest were made by Tordo et al. (2011), who suggest that most NOCs operate with a core characteristic, the ‘national purpose’. The authors contest that NOCs “serve political and economic goals other than maximizing the firm’s profits. Perhaps this is the most relevant single factor that explains their existence and resilience in very different political, social and economic environments” (Tordo et al. 2011, p. 8). Value creation was not limited to conventional linkages previously highlighted by Hirschman (1958); in defining what is meant by the political, economic and even social objectives, Bentham (1988) and Grayson (1981) take a broad approach and point to ideas of security of supply within the domestic market, conservation of oil reserves, developing local content and ultimate control over production.

The socialist and nationalising trend of the post-war era was experienced throughout the world; however, nascent hydrocarbon nations were arguably even more prone to the socialist agendas buoyed by the promises of their resource wealth. For example, Madelin comments that, "Algeria envisages achieving socialism through Sonatrach (Algeria's NOC)" (Madelin, 1974, p. 128). In some cases, the creation of the NOC was perceived to be firmly in the national interest, not acting as an extractive institution but a tool for redistribution. As Gorhban notes "they (NOCs) are sometimes assigned by their respective governments to fulfil political and social tasks in which a private oil company would not wish to participate" (Gorhban, 1989 p. 23). As an intervention, nationalisation was consistent with the institutionalist, Weberian notion that ideal interventions would also serve a social good which the market economy may neglect.

In many parts of the world, the nationalisation project was successful in actualising a number of national objectives. Khan argued that the NOC has become "an indispensable tool for mobilizing state policy at both national and international levels (to ensure) a national mobilization of resources" (Khan, 1987, p. 185-186). However, many nationalisation efforts have not stood the test of time; in recent years, the economic and political agenda of market liberalisation and privatisation have continued to influence many nations around the globe. Whilst Norway, China, Brazil, India, Pakistan and Japan have all partially privatised their NOCs, other nations, including Mexico and Kazakhstan have made significant changes to the regulatory framework, loosening the control of the NOC. These moves, with some exceptions (Heller and Marcel, 2012), seem to suggest that NOCs have failed to deliver the anticipated value to the local / national economy.

2.2.1 The Demise of NOCs

There have been numerous studies to investigate the alleged inefficiency of NOCs (McPherson, 2003; Eller et al., 2007). NOCs are frequently noted as having sub-standard operational efficiency due to inadequate technical and managerial capacity as well as inefficient human resources policies (Jaidah, 1980; Al-Mazeedi, 1992; Gochenour, 1992). Victor (2007) found that on average NOCs produce nearly two-thirds less per unit of reserves than IOCs and generate significantly less revenue per unit of production. Linde (2000)

contended that the inefficiency of NOCs became particularly apparent because of the increasing competence of IOCs who were forced to embark on efficiency drives following a wave of nationalisation and the creation of OPEC. According to Stevens (2004), many NOCs fell behind in technical competency and lost the ability to take on more advanced projects on their own.

Whilst NOCs still control a vast proportion of the world's proven oil reserves, the past two decades have seen the influence of NOCs wane and IOCs re-emerge in locations previously off-limits. Norway, China, Brazil, India, Pakistan, Saudi Arabia and Japan have all partially privatised their NOC. Other nations, including Mexico and Kazakhstan have made significant changes to the regulatory framework, loosening the control of the NOC. This trend raises questions of the national interest and how value creation can be maximised in the absence of state dominance in the national oil industry. NOCs are still a force in the industry, however the apparent fall of the NOC has created a situation whereby value creation through local content cannot be solely a state responsibility. Nowadays, rather than a totally nationalised industry, a NOC often operates alongside private companies; this approach is advocated by the so-called Norwegian Model (discussed in the next section). In such an arrangement, the NOC's scope for employing locals and procuring from the local supply chain is reduced.

While this thesis does not apply the ideas of nationalisation to Uganda's oil sector, it is important to understand and work with the concept that oil reserves are often expected to serve national interests, regardless of whether the industry is nationalised or not.

Uganda's NOC, UNOC, has a remit to champion national participation, however as a non-operating partner, its main contributions to national value creation are likely to be through projects to ensure the security of supply within the domestic market and facilitating the development of a petrochemical industry. It could also be argued that the relative demise of the NOC has engendered greater discussion about good resource governance which is situated in the context of an open but regulated industry.

2.3 Good Governance and the Norwegian Model

Key concepts:

A review of the literature on good governance reveals three key concepts as essential for developing a useful interpretation of local content in this thesis, namely, institutional quality, the Norwegian Model and the institutional capacity. Definitions based on review of key literature, including that of Heum and Asiago.

Institutional quality – A broad concept concerning law, individual rights and high-quality government regulation and services. It is deemed that institutional quality reinforces economic growth and vice-versa over time.

Norwegian Model – A tripartite system of governance for the oil and gas sector, loosely based on Norway's own experiences of governing its resources.

Institutional capacity – The capacity of institutions of state to undertake and carry out their remit to achieve set objectives.

More recently, a body of literature has emerged which focuses on the role of 'good resource governance' (Leite & Weidmann, 1999; Mehlum et al., 2006; Robinson et al., 2006; Ross, 2012). Many studies on the extractive sectors in the Global South focused on explaining the inverse relationship between natural resource extraction and development agendas (Auty, 1994; Auty, 1995; Frankel, 2010; Humphreys et al., 2007; Sachs & Warner, 1995, 2001). Authors such as Mehlum et al. (2002) pointed out that the potential to turn resource endowment into economic growth may depend upon the quality of the host government's institutions. This body of literature is less concerned with linkages but situates itself within the notion of the 'resource curse' and focuses on the connection between good governance practices and positive development outcomes. It is argued that development potential can be unlocked through certain technocratic reforms of governance institutions and revenue management.

The notion of good governance arose out of the Post-Washington Consensus (Williamson, 1990) which recognised that most developing countries faced similar challenges, including government inefficiency, corruption and low bureaucratic capacity. The concept, rooted in neoliberal theory, proposes a number of economic and policy reforms and was strongly promoted by multilateral / donor organisations such as the World Bank and the International Monetary Fund. Resultantly, these institutions often prescribed good governance in the Global South, encouraging neoliberal market reform (the expansion of market forces within the economy), the development of strong formal institutions and democracy. Commitment to good governance often became a condition for access to donor funding and loans.

Policy debate has also been framed within this good governance-resource curse nexus. The underlying premise is that a number of relatively straightforward interventions can drastically improve the development trajectories of resource endowed nations. However, good governance is not universally considered a panacea to the resource curse. Whilst Bourgoignie and Haarstad (2013) accept that administrative improvements and well-targeted measures may have transformative potential, they question the extent to which good governance alone can improve development outcomes. The authors argue that there are political economy processes shaping resource governance beyond a good governance framework.

Massey and May (2005) contend that World Bank's failure to leverage oil for development in Chad, through restructuring, mechanisms to improve transparency and revenue management, is testament to the limitations of good governance prescriptions. Authors, such as Phillips et. al. (2015), believe that the Chadian example is testament to the influence of political economy factors, arguing that Chad's post-colonial history, marked by factionalism, instability and violent conflict undermined the potential for governance reforms to positively influence the development trajectory. The authors contrast Chad's political economy with that of Ghana, noting that "the Ghanaian polity is closer to a Weberian rational-legal ideal, presiding over a formally liberal market economy marked by respect for the

rule of law, a history of democratic transitions of power, a stable parliamentary democracy, and a ‘functioning’ civil society” (Phillips et. al. 2015, p. 3). In turn, their observations suggest that Ghana’s experience with oil is likely to be more positive. Chad experienced negative social and environment impacts, conflict and severe economic mismanagement (Carmody, 2009). Meanwhile, a decade after first oil, Ghana has not experienced negative effects on the same scale, although it is arguable that the current level of oil production is not significant enough to engender resource curse symptoms or Dutch Disease.

2.3.1 The Norwegian Model and its Application to Nascent Oil and Gas Economies

Nevertheless, it is broadly considered that certain governance practices improve the development trajectory of resource rich nations. Norway’s approach to resource governance and its unique success is widely considered to be illustrative of the impact of good governance and strong institutions. Academic interest in Norway’s approach is foremost a response to the country’s isolated success but also the exportation of the so called ‘Norwegian model’ (Heum, 2008) by the Norwegian development agency, NORAD. The ‘Norwegian Model’, based on the establishment of three institutional bodies, draws on the nation’s institutional design, revenue model and more recently has been underpinned by high levels of investment in education and research and development. The Norwegian NOC, Equinor, is a visible manifestation of Norway’s success in avoiding the resource curse, creating inclusive wealth and representing a fairly unique case of a NOC that has developed from a small national operator into a global power.

For the past decade discussion around the Norwegian Model’s relevance to other resource endowed nations has formed a considerable part of the debate regarding resource sector governance. A number of academics have discussed the extent to which Norway’s experiences constitute a model at all, some contend it is solely an administrative model, whilst others discuss whether Norway’s experiences have further application to local content. Academics (Heum, 2008; Thurber. et. al. 2011; Doric & Dimovski, 2018) refine the definition of the Norwegian Model to an administrative design which splits the interests of state between a government ministry to direct policy, a regulatory body to provide over-

sight and technical expertise, and a NOC to engage in commercial interests. Other authors, including Asiago (2017), examine whether the framework can be expanded to incorporate a model for local content as well. Asiago (2017) finds Norway's experience with local content insufficient to be considered a model, particularly as the government was not committed to any long-running or notable localisation agenda.

Norway created responsible and accountable formal institutions to govern the sector. The tripartite model is based on the formation of three institutions, in Norway this was the Ministry of Petroleum for policy-making, the Norwegian Petroleum Directorate for technical control, regulation and advisory functions, and Statoil (now Equinor), the nation's oil company, originally used as an instrument for implementing government policies and to take care of commercial interest. The separation of powers and responsibility for policy making, and commercial interests has been very important in ensuring transparent government activities and that business (Equinor) remained separate from government interests (Polus and Tycholiz, 2017). Norway's democratic traditions have also provided the reassurance that the state of play would remain constant, allowing operators to plan for long term investments in the local supply chain and local people.

In the case of Norway, a strong bureaucratic tradition supported the development of the nascent institutions into informed, moderating forces. Authors such as Al-Kasim (2006a, 2006b), Espinasa (2008) and Thurber et. al. (2011) have considered possible benefits of the separation of functions, noting that Norway's tripartite model, or one similar, can be a key determinant in what Thurber et. al. (2011) term 'oil sector performance' as well as more general economic outcomes. However, Thurber et. al. (2011) contend that where institutional capacity is weak, consolidating commercial, policy, and regulatory functions into one body may result in better outcomes. The authors argue that the separating of functions in Nigeria, pre-dated that of Norway's institutional design and is remarkably similar. However, Nigeria's indigenous bureaucracy was undeveloped when the tripartite design was implemented, resultantly the triad was ineffective, subdued and eviscerated by the ministry (Nwokeji, 2007). Thurber et. al. (2011) also conclude that in the absence of ample

human capacity, spreading competencies too thinly across multiple government bodies is likely to negatively impact institutional capacity.

It is important to note that Norway has been instrumental in the development of Uganda's administrative system for managing the nation's oil industry, one of the many contributions made by development and donor agencies to Uganda's oil sector. Within the Norwegian Agency for Development Cooperation's (NORAD) Oil for Development Programme, the two governments began to implement a three-year programme entitled "Strengthening the State Petroleum Administration of the Upstream Sector in Uganda". This was followed by a five-year programme which looked to build state capacity as well as a legal and institutional framework to cope with bureaucratic pressure of upcoming oil production. However, the question remains, how compatible is Norway's administrative model with the Ugandan political, economic, and social conditions. In building on this, it is necessary to consider how this administrative model is impacting the realisation of Uganda's local content objectives and in the context of a new operating environment globally.

A publication from Polus and Tycholiz (2017) reviewed the applicability of the Norwegian Model to Uganda. The authors assessed whether tripartite separation of functions between the national oil company (UNOC), a petroleum authority and the ministry was likely to be successful in Uganda, noting "the political landscape, and an institutional structure characterized by neopatrimonialism and clientelism, is not easily compatible with the Norwegian Model of oil-sector management" (Polus and Tycholiz, 2017, p.196). In general, administrative strategies which work well in countries with mature institutions may be ill-suited to countries lacking certain institutional endowments (Grindle, 2004, 2007; Moore and Putzel, 1999; Rodrik, 2008; Ramírez-Cendrero & Wirth, 2016; Polus & Tycholiz, 2017). However, Polus and Tycholiz contend that "Norwegian experience in oil sector management can serve as an inspiration for sub-Saharan states" (Polus and Tycholiz, 2017).

2.3.2 A Norwegian Model for Local Content?

Asiago (2017) considered the transplanting of a local content strategy from Norway to Nigeria, concluding that Norway did not necessarily have ‘the model’ and if a strategy needs to be transplanted from one country to another, they should have fundamental similarities, which Norway does not. Norway, then as now, has few similarities with underdeveloped or developing nations; when Norway began producing oil, its possession of a highly educated workforce, substantial academic and vocational training capacity and industrialised economy is in stark contrast with Uganda. Heum (2008) and Sasson & Blomgren (2011) both provide a narrative to suggest that Norwegian government policy and regulation was sufficient to encourage operators to adopt a localised business model where possible. However, as noted by Ryggvik (1997), local employment and procurement was not substantial until Statoil’s emergence as the serious operator. According to Olsen (2013), in 1994, the Norwegian oil industry achieved 74% local procurement, the most of anywhere in the world and had not been surpassed at the time of writing. More recent achievements, notably the expansion of Norwegian service companies and the NOC, have benefited from dynamic state intervention which enhanced indigenous capacity. Since the turn of the century, the government was effective in channelling resources into education, research (such as the Centre for Oil Recovery in Stavanger), development and providing scholarships for visits abroad. Resultantly, dynamic state intervention built upon existing capacity in creating a highly attractive cluster of technical competence.

Heum (2008) provides further evidence that Norway’s experience does not constitute a replicable approach to local content. The author highlights that Norway had not been explicit in determining how national industry was to be developed until the mid 1990s. An early focus looked to develop industrial competence in areas where Norway already had some degree of expertise, a luxury not all national oil industries have benefited from and resultantly reduces relevance of Norwegian experiences to the new frontier nations of oil and gas exploration. Dissimilarities between contemporary Uganda and 1960s Norway do not end there; in the early years at least, Norway did not look to develop capabilities in all areas of exploration and production. Ryggvik (1997) concurs, noting that the Norwegian labour market was at full capacity, and that the Norwegian government chose not to un-

dertake any initiatives to boost national educational capacity in oil and gas-related subjects; despite a lack of government support, some universities established courses within the field of oil and gas. In 1978, the Norwegian government first made it clear that the use of Norwegian personnel would be an evaluation criterion used in assessing applications for new licenses (Ryggvik 1997), however, the share of foreign workers in the petroleum workforce steadily increased to 20 percent for the country as a whole and to more than 30 percent in the main petroleum county, Rogaland (Ryggvik 1997). In many cases local people were employed as roustabouts to make up the numbers.

It could be argued that there was little design to Norway's approach to local content. Instead, Norway's local content story bears a close resemblance to the global trends of compliance in the early years, a movement towards greater national ownership and then renewed investment in education and training in the early 21st century. In the early years, Article 54 was established by the Ministry of Petroleum which compelled the oil companies to inform the Ministry that Norwegian companies were on the bidders' list. As in other nations at the time, including post-colonial states, oil companies were tasked with developing plans as to how to enhance the competitiveness of local firms. The rise of Norway's NOC Statoil provided greater national ownership and the local content that frequently accompanies it. Furthermore, as Sasson and Blomgren (2011) note, the Norwegian government has only become more engaged and involved in the development of competences since the turn of the century; motivated by the concept of turning Norway into a hub for knowledge and maintaining Norway's attractiveness for oil and gas businesses despite slowing oil production.

In summary, the concept of the Norwegian Model was born out of a model for the separation of powers which may be counterproductive in nations where institutional quality is weak or leaders display discretionary power. The literature is also conclusive in that Norway's approach to local content does not constitute a model robust or rigid enough to be transplanted. Indeed, Norway's success in resource governance was largely reactive, Polus and Tychloiz comment that "the Norwegian Model is processual in nature; it devel-

oped gradually and was adapted to a constantly evolving internal and external environment” (Polus and Tychloiz, 2017, p. 196). Despite criticisms of the model, this thesis draws upon existing literature concerning the Norwegian Model, as the tripartite system has been implemented in Uganda. As such its applicability to nascent hydrocarbon industries is tested in this thesis. Reflecting on Thurber et. al.’s work (2011), Chapter 7 assesses whether Uganda’s institutional capacity and neopatrimonialism undermines the Norwegian Model and the effective administration of the oil and gas industry.

The notion of the Norwegian Model has also been useful in stimulating further discourse into the role and importance of institutional design and strength. This debate is also illuminating when investigating the case study of Uganda, providing a lens through which to view research findings. However, institutional capacity does not directly influence local content. Instead, it must be considered a precursor to government policy and other interventions that may impact the development and adoption of local content. Should institutional capacity be strong, policy interventions and other initiatives, such as the creation of oil and gas centres of excellence, may be better implemented by government bodies.

2.4 Local Content Policy in 21st Century Oil and Gas

Key concepts:

Local Content Policy – Policies aimed at developing and encouraging the adoption of local content. In existing literature, this primarily revolves around regulation rather than supply side policies and interventions.

Whilst the concept of linkages is fairly mature in literature, local content is not. Much literature concerning local content is situated within the discourse on regulation, legalisation and policy, as well as institutional quality and good governance. Donor and multilateral organisations have been prominently involved in local content policy and governance research as part of their commitment to promote growth and boost shared prosperity, notable publications include Tordo et. al. (2013, The World Bank) and Klueh et. al. (2007, International

Monetary Fund). Their work often corresponds with active programmes led by their organisation; over the past decade it is possible to note the increasing involvement of donor and multilateral organisations in local content programmes.

As noted by Klueh et. al. (2007), the quest for increasing economic benefits through local content traces back to the establishment of NOCs (as discussed in 2.2) and the lesser-known developments in the UK in the 1970s, as the government sought to monitor and audit purchases made by oil companies. In practice, local content policy (LCP) has become more prominent in the 21st century as oil and gas operations emerged in new and often underdeveloped frontiers as well as previously nationalised nations which have been opened up to the international market.

Whilst Klueh et. al. (2007) highlighted that mature oil producing nations have taken differing approaches to governing local content or “value-added”, an important conclusion from Tordo et. al. is that “there is no standard package of LCPs (Local Content Policy) and tools that works for every country in every circumstance” (Tordo et. al. 2013, p. 18). This reinforces the conclusions of the previous section (regarding the Norwegian Model), that good governance requires an adaptive approach to evolving internal and external environments. The variety of circumstances in which there is a requirement to implement local content policy makes it challenging to prescribe a predetermined model. In extrapolating this information, we can note that whilst other countries provide valuable examples of resource sector governance, different countries will require varied approaches.

Both Klueh et. al. (2007) and Tordo et al. (2013) identify the evolution of government policies and the conventional instruments of governance that can be utilised to aid the development of local content. Their work is useful in developing an understanding of the mechanisms of local content policy and delivers a conceptual overview complemented by national examples of policy implementation. Tordo et al. (2013) highlighted the following policy instruments: Policy Statements, Strategies, and Plans, Primary Legislation, Secondary Legislation, Petroleum Agreements, Petroleum Rights Allocation Systems, Taxes and Tar-

iffs, Market Regulation, Employment Regulation, Tender Procedures, Reporting and Monitoring Regulation and the Recruitment, Training, and Promotion of Nationals. They contend that some of these policies are assertive, and some encouraging.

However, local content policy alone is not the solution to localisation challenges. Ihua contended that local content policy in Nigeria had not achieved significant success, highlighting outstanding issues such as “cumbersome prequalification and entry requirements, underfunded and ill-equipped educational institutions, *laissez-faire* attitude of multinationals, ineffective monitoring and control by regulatory authorities, and inadequate financing options for indigenous SMEs still hinder the policy efficacy” (Ihua, 2010, p. 3). Adedeji et. al. (2016) agree, adding that LCPs had not had the expected impact in Nigeria and suggesting that the implementation of LCP needs to be monitored closely to ensure its efficacy. Resultantly, the nature of the policy and the quality of the implementation are critical determinants of the policy’s success. Kalyuzhnova and Belitski (2019), in a study on resource rich Kazakhstan, also conclude that the implementation of the explicit local content policy requires monitoring to ensure its efficacy.

Whilst Tordo et al. (2013) highlight a number of means by which a government can mandate and encourage operators to pursue local content goals, their work omits interventionist policies, such as financing for local enterprise, the creation of academies to deliver the requisite competences, scholarships and the construction of business parks to provide suppliers with access to necessary services and amenities. I believe this is also demonstrative of the preference of the World Bank and the IMF for a regulated, yet largely free market environment, rather than a more interventionist or developmental state approach. Mushemeza et. al. (2017), although largely focused on policy, note the effectiveness of government run training in enterprise centres in Angola and Nigeria in raising indigenous capacity and proposes the potential for future application by other governments. Whilst my study commenced before Mushemeza et. al.’s work was published, I agree with the sentiment that more research is required in this area and I look to highlight the case for greater dynamic, government interventionism into local content development.

This area of research, assessing the effectiveness of local content policy, is not a perfect science and, as yet, is largely uncritical as there are very few well-examined case studies which evaluate the effectiveness of different approaches to local content policy.

Mushemeza et. al.'s (2017) study, pioneering in its empirical insights into local content policy, highlight the difficulties in examining what constitutes an effective framework for local content and the difficulties in delivering a comparative analysis of its effectiveness. Whilst a number of their conclusions are aligned with conventional wisdom that institutional quality is a critical success factor, their analysis of the strength of local content frameworks is subjectively rated by the authors.

It is important to note that, like nationalisation and good governance practices, local content policy does not represent a panacea to value creation challenges. However, local content policy forms an important part of this research, underlying the principles of state involvement and intervention in the oil and gas sector to engender greater benefit for the nation. Rather than purely policy relating to regulation, this thesis addresses the interventions which dynamically aid local content development in line with industry requirements.

Previous studies have also demonstrated that the capacity to implement local content policy is a key determinant in whether the policies are influencing operator behaviour. This is undoubtedly one of the largest challenges for underdeveloped and developing nations. A specific criticism of Tordo et. al.'s (2013) highly influential paper, is that it constitutes an approach that only mandates or encourages operators to conform to local content objectives. Resultantly, there is no consideration given to the role of an interventionist state, operators, other industry players and donor / multilateral agencies which are more practical in nature and have a direct impact on local content development and subsequently, its adoption. Interventionist approaches that see multiple stakeholders engage in local content development include the use of scholarships to train local talent, the creation of business zones and establishment of relevant academic and vocational institutes.

It is arguable that Tordo et. al.'s omission may be because of the often-secretive operations of oil companies and that (as this paper hypothesises) oil and gas operators have

only become more committed to local content in recent years, the latter can also be applied to donor interventions. Tordo et. al. comment that “local content is a complex and fast-evolving area. Until quite recently most international oil and gas companies viewed local content as part of their corporate social responsibility agenda. But a plethora of new government policies and regulations has shifted local content into a compliance regime” (Tordo et. al. 2013, p. 61). Whilst this was a valid observation at the time, I contend that local content is, now, more than a matter of compliance. Instead, we must now look to identify local content as a cost-efficient business model that is being implemented for the benefit of operator and state alike; this in turn means that my research must focus on operator initiatives as a component of local content development.

2.5 Oil and Gas Operators and Local Content

Key concepts:

A review of the literature on oil and gas operations in the context of local content reveals three key concepts as essential for developing a useful interpretation of local content in this thesis, namely, localisation, workforce localisation and globalisation. Definitions based on review of key literature.

Localisation – The process of moving away from operational inputs being non-indigenous in nature, to employing and contracting nationals and local firms.

Workforce localisation – The process of training and developing local workers to take up roles occupied by expatriates within a firm.

Globalisation – The process by which the world is becoming increasingly interconnected. In the case of oil and gas, which has long been an industry reflecting globalisation, national operations often involve substantial foreign inputs, including labour and services.

It is broadly agreed that operators must link their strategies with local content policies and government objectives in order to deliver an enduring positive socio-economic impact (Ayentimi et al., 2016; Hansen et al., 2014; Ngoasong, 2014). Despite this notion, Ngoasong contends that “it remains debatable whether the business practices of IOCs are consistent with what actually makes a difference in terms of economic development” (Ngoasong, 2014, p. 478). In contrast to my personal experience in the industry and the narratives proffered by operators and their representatives at the time of the oil price crash, academics such as Warner (2011) and Adewuyi & Ademola (2012) did not observe IOCs or multinational operators to be active or engaged with localisation agendas. In reflecting the nature of local content, literature largely separates human capacity with procurement and supply chain management.

Ngoasong (2014) contends that poor mechanisms for reporting and monitoring make it more difficult to observe trends in local employment, procurement and operator-led local content development. As such, much of the employment and procurement data accessible will be courtesy of the companies themselves, which in some cases may lead to the dissemination of mistruths in order to maintain the illusion of compliance. Tordo et. al. (2013), Henisz et al. (2014) and Andrews & Playfoot (2015) suggest that, historically, the only motivation for operators to meet local content quotas is to legitimise their position with the host government and local stakeholders. With a conclusion similarly dismissive of operator commitments, Weldegiorgis et. al. contended that “too often local employment and procurement policies have been simply a good will gesture” (Weldegiorgis, et. al. 2017, p. 31). This notion is arguably most applicable in undeveloped or developing nations where indigenous capacity does not naturally satisfy operator requirement for labour and procurement, resultantly adopting local content would make less business sense.

A common theme in more historical literature concerns expatriate managers and has focused on facilitating the adjustment of the manager, their spouse and family to the new location (Baker & Ivancevich, 1971; Black, et. al., 1991; Hayes, 1974; Hixon, 1986), reflecting the increasing globalised nature of the oil industry and other sectors like it. According to Fryxell (2004) “in this stream of research the emphasis has mainly been on retaining

expatriates and improving their productivity rather than addressing the problem of how to replace them with a maximum of skill transfer and a minimum of disruption” (Fryxell, 2004, p. 270). Resultantly, this body of literature worked in conflict with localisation agendas.

In responding to the above literature on globalisation, a number of academics contended that a localised workforce has a number of benefits (Fryxell, et. al., 2004; Hailey, 1996; Law et. al., 2009). In spite of the consensus that workforce localisation is likely to have more benefits than drawbacks, operators have traditionally shown little desire to localise their workforce and supply chains for overseas projects as there was an abundance of easy oil and resultantly operational profitability was less impacted by oil price fluctuations. Nowadays, it is increasingly the case that new oil discoveries are offshore, which are more expensive to develop, and in less developed nations, like Uganda or Guyana. Resultantly many operational costs have gone up as well as the requirement for skilled labour.

Whilst local procurement and Job Role Localisation (JRL) are often mandated through legislation, regulation or contractual obligations, occurrences of non-compliance are commonplace (Esteves et. al., 2013). The benefits of operating a localised business have been well discussed among academics; JRL is a solution to expatriate failure rates, improving rapport and confidence amongst national staff which in turn increases retention rates and improves government relations (Karam, et. al., 2015; Selmer, 2003), whilst other authors claim that JRL reduces costs (Kobrin, 1988; Fayol-Song, 2013). Pegram (2018) contends that JRL is becoming increasingly important in the current operating environment. However, it should be noted that the term JRL is not always approached from the perspective of the operator or the private sector. In a number of studies, job role localisation is actually approached from the perspective of the state and considers the challenges and necessary inputs to localise relevant industries, this is common in literature concerning Emiratisation such as Faisal et, al. (2018) but in essence is similar to work on local content policy.

Pegram et. al. (2018) believes that operators frequently work in isolation as a result of the competitive and often secretive nature of the industry, which “means different organisations frequently attempt to solve the same problems without addressing systemic local content issues” (Pegram et. al. 2018, p. 17). However, research tells us that cooperation and working as a cluster can enhance knowledge sharing, concentrate efforts to deliver competences as well as advance local competitiveness and capability in line with the needs of industry (CCSI, 2016; Morris, et. al., 2012; Sigam and Garcia, 2012). Sigam and Garcia (2012), also contend that clusters are particularly beneficial when synergies are created across the value chain; the authors note the coming together of stakeholders, government, universities, mining firms and local companies in Chile’s mining industry. This notion is a central feature of my thesis; I believe there is now more stakeholder engagement in the oil industry around local content than ever before as local content becomes a common and more desirable objective among all stakeholder groups.

Significant investment and support are often required of operators to pursue localisation efforts (Arthur and Arthur, 2014), Uganda is no different due to its dearth of inherited competences. Although there is a common understanding within the industry that localisation can represent part of an efficient business model, there is an absence of research concerning the scale of investments required of operators in order to localise their operations. Many existing studies suggest that JRL can reduce costs, without quantifiable evidence to substantiate these claims (Dickmann et al., 2017; Fayol-Song, 2013; Hickey, 2017). This lack of substantiation was addressed by Pegram et. al. (2018), whose study highlighted that whilst not all job roles should be localised, the training and development investment timelines presented empirical evidence to suggest that JRL can lead to cost reductions. These findings of Pegram et. al. (2018) have further implications for this thesis, informing an important premise that higher levels of local content represent a cost-effective business model for oil operators.

Pegram et. al (2018) assessed the viability of localising particular job roles using a case study from Eni Ghana, although it is clear that there is more to learn about the mechanism by which the localisation process takes place, especially in an environment where multiple

stakeholders have a shared interest and responsibility to deliver local content. In echoing the recommendations of Pegram et. al. (2018), further research is required to explore how localisation efforts differ between operators and how effective these efforts are when governments and operators work collectively in this new operating environment characterised by shared responsibilities. In turn, my thesis responds to the need for greater understanding of this environment in which there are multiple, active organisations in the development of local content and correspondingly, its adoption.

2.5.1 Local Procurement and Supply Chain Management

Supply chain management and risk management are well observed in literature, although, from a business perspective, there appears to be a dearth of work focusing specifically on oil and gas operations. In a 2011 study on all extractive industries, Esteves & Barclay contended that “there is a growing awareness among practitioners that procurement from local SMEs can bring significant social and economic benefits to communities” (Esteves & Barclay, 2011, p. 206). This notion has been accepted for some time by academics and observers of resource industries. Whilst there have been a number of studies across multiple industries (Deloitte, 2004; Jenkins et al, 2007; Nelson, 2007; Ruffing, 2006; UNCTAD, 2001) discussing the growth in SME development programmes, these programmes were frequently between governments, support institutions and development agencies, and not industry or operators.

The benefits for operators to increase engagement with the local economy can be wide ranging. Esteves et al. (2011) note that “from a corporate perspective, local economic participation is seen as one means of maintaining a social licence to operate, as well as ensuring reliability of supply by having a supplier located nearby” (Esteves et al., 2011, p. 233). This marks a movement away from the initial motivation, which was a need to comply with formalised commitments (Esteves & Barclay, 2011), and towards a position where additional benefits are realised. Despite Esteves’ prominence in this area of research, the author rarely discusses any economic or financial benefits that may be accrued by operators for greater engagement with local suppliers. For example, Esteves et al. (2015) dis-

cuss Shell Nigeria as a company that has responded to heightened community expectations and accordingly has introduced local procurement planning for the entire project lifecycle.

Esteves et al. (2010) and Esteves & Vanclay (2009) indicated that operator attitudes towards local procurement were continually evolving. Esteves & Barclay's work proposed a movement away from compliance and towards an approach "motivated by the desire to establish and maintain enduring partnerships with local suppliers for mutual benefit" (Esteves & Barclay, 2011, p. 207), contrasting the conclusions of Tordo et. al. (2013) as noted in 2.4. Resultantly, Esteves & Barclay contended that some operators were being more proactive, giving preferential weightings to local suppliers in the bidding processes, allowing local suppliers to price match with international competitors, unbundling large contracts into smaller ones and contractual obligations with international oilfield service companies and EPC contractors (Engineering, Procurement, Construction) to procure locally themselves as well as supplier development initiatives (Esteves & Barclay, 2011); however, there are no examples provided by the authors of the aforementioned initiatives being implemented.

In contrast, Mohammad's (2009) study in oil and gas, like other works that preceded his, criticised operator procurement strategies for being disengaged from local suppliers, suggesting that operators could be more proactive in delivering opportunities to the local economy. A primary reason for this appears to be the cautious nature of operators and their averse relations with supply-chain risk, which is defined as "the potential occurrence of an incident with inbound supply in which its outcomes result in a financial loss for the firm" (Zsdisin et al., 2008, p. 402–3). These risks are likely to be more pronounced in less developed operating environments. More recent literature reflects the notion that operators are more willing to engage than in the past and as such can play a part in reducing the risks of procuring from local suppliers. Östensson (2017) in a study on resource industries contended that companies increasingly engage with suppliers to assist in local capacity development, "The industry is usually prepared to participate in such efforts, provided that their impact on costs is limited" (Östensson, 2017, p. 522).

Furthermore, the subject of local content development, either separate from other discussions or as part of them, is insufficiently explored. The topic itself is in theory and practice, often detached from local content policy, with people responsible for local content development, be it an operator, a government employee or a development agency, often being practitioners rather than policy experts. De Vita et. al. (2015) and Pegram et. al. (2018) are some of the few works that deliver a rigorous analysis of local content development and the mechanisms by which it takes place. Both Pegram et. al. (2018) and De Vita et. al. (2015) both provide evidence that operators are involved in local content development, either through the provision of in-house training (training by operator employees) and the development of links between operators and higher education.

In summary, within the existing literature, there is an acceptance that the adoption of a more localised supply chain can deliver a number of benefits for operating companies, be it reduced logistics costs or increased social capital with local communities. Whilst there is some work that suggests operators are increasingly keen on nearshoring (the process of adopting a more localised supply chain), there is not a dearth of evidence to support this. As Östensson (2017) alludes to, multiple stakeholders are now concerning themselves with local content and its development, acknowledging that both the local economy and the operators stand to benefit. Despite the breadth of academic work on workforce management, I believe that only Pegram has delivered real insights into workforce localisation in oil and gas from the operator perspective. As Pegram's work (2018, 2019) has been focused solely on the operator staff and their development, there remains a dearth of real insight concerning operator engagement with local suppliers, although I do acknowledge that operators show more commitment to personnel development than supplier development.

Acknowledging the key concepts discussed in this section, the study is situated within the globalisation-localisation nexus, with the research focusing on the movement towards localisation. Several aspects of Pegram's work (2018, 2019) have helped inform this study's

focus, highlighting the traditionally isolated nature of oil and gas operations but also underlining the business case for operating more locally with regards to the workforce. The notion that there are financial incentives for operating more locally is also a key concept, taken forward by this research. Pegram's work is also based on the understanding that a localised oil and gas industry can be a vehicle for broader economic development.

2.6 Literature Overview and Gaps

Although studies have been conducted by many authors, local content adoption and development in the oil and gas industry is still insufficiently explored, particularly with regards to what influences changes in operator uptake of local content, e.g. regulatory and market forces. This insufficient exploration is made more acute in light of the premise of this research, namely that the operating environment is engendering greater commitment to local content and its development, not only from operators but increasing involvement of the government and donor agencies too. Whilst some authors (Tordo et. al., 2013; Klueh et. al., 2007) have addressed only local content policy, other authors (Fryxell, 2004; Ngoasong, 2014) have only approached the issue from the perspective of the operators. In responding to the above, this thesis addresses the need for research which approaches the topic of local content adoption and development from a multi-stakeholder perspective, also reflecting the often unformalized or ad-hoc nature of the relationships and seeks to improve understanding through the use of the political economy lens.

The literature reviewed in this chapter demonstrates the progression of the dominant thought and trends concerning value creation in the oil and gas industry throughout the last century. The earlier studies remain applicable in the new operating environment and will form the building blocks for this research. Hirschman's (1958) 'linkages' remain relevant across all local content and value creation literature, while more recent literature has contributed observations for the effective delivery of local content (Tordo et. al., 2013, Klueh et. al., 2007, Mushemeza et. al., 2017). Efforts to characterise Norway's experiences as a model for successful resource governance highlight the effect of strong institutions, stable polity and economy on resource sector performance. Similarly, producer

friendly institutions which follow the law and promote stable growth, act accountably, bureaucratically and avoid corrupt behaviour are most likely to have effective local content mechanisms (Mehlum et al., 2006; Robinson et. al., 2006; Sachs, 2007).

Existing literature also highlights the challenges of prescribing models, noting that the circumstances of any national oil and gas industry are unlikely to be identically replicated elsewhere in the world. Whilst the benefits of an administrative framework that fosters institutional capacity are clear, authors such as Asiago (2017) contend that transplanting anything more than an administrative framework from a nation like Norway, to an underdeveloped economy like Uganda, is unlikely to succeed. Thurber et. al. (2011) also contend that the notion of the prominent Norwegian Model and the separation of institutional functions, may be counterproductive if existing institutional capacity is insufficient. As such, this research seeks to show that although local content benefits can accrue from administrative frameworks that may be transplanted from abroad, there are multiple variables that influence the development and adoption of local content, many of them more directly than institutional quality. Correspondingly, this thesis will investigate a wide range of factors that influence local content, including operator attitudes, local content policy, indigenous capacity and political economy factors.

More precisely, there is a dearth of empirical research that looks at workforce localisation and nearshoring purely in the oil and gas industry; as highlighted by Kim et al., (2017), the majority of existing local content studies within extractive industries have focused on mining which demands different human capacity and inputs, albeit linked by the concept of the resource curse. One reason for this seems to be the challenge of gaining access to secondary empirical data within the oil and gas sector (Harry, 2007). As a result, studies that assess the impact of oil and gas often utilise generalised means of analysis such as multipliers, input-output tables and GDP statistics (Tordo et al., 2013). Authors such as Kazzazi and Nouri (2012) have highlighted the need for more empirical works as this will enhance our understanding of local content and specifically the mechanisms that enhance it.

I believe that addressing workforce localisation and procurement in the same study allows us to develop a more rounded understanding of operator attitudes towards local content as well as the effectiveness of policy interventions and other initiatives. Whilst individual studies on workforce localisation such as Pegram et. al. (2018), provide vital insights into that specific topic, for a more complete understanding of operator attitudes to local content, it is necessary to study both procurement and workforce localisation together. As such, this thesis delivers a robust study of local content by addressing procurement, workforce localisation and local content development initiatives together and investigates the influencing factors.

As I hypothesise, operators are more engaged with local content today than they were in the past. However, there is no study that proves, either by the use of empirical evidence or other data, that attitudes towards local content have changed. Such a finding would require a study to take data from the past and compare it with more recent data. I consider this to be another gap in existing literature and one which I address in this thesis.

It is widely agreed that delivering an enduring positive socio-economic impact requires operators to link their strategies with national local content objectives (Ayentimi et al. 2016; Hansen et al. 2014; Ngoasong, 2014). In general, this study responds to a prominent gap in the literature, namely, a lack of understanding of the factors that influence local content adoption and the mechanism by which local content development takes place in a multi-stakeholder environment. As such, this research is designed to investigate the aforementioned lack of understanding and deliver insights that may inform future local content interventions and industry strategies. To do so, an institutionalist political economy framework provides the ideal lens to explore the practices of stakeholders and investigate what historical and socio-economic factors influence activity around local content.

In summary, this thesis is situated within existing literature, such as that written by Hirschman, which highlights the importance of establishing linkages between the resource sector and the wider economy. While there has been considerable discourse on the role of good

governance, I concur with academics such as Bourgouin and Haarstad (2013) and Massey and May (2005) who question the limitations of good governance prescriptions alone.

Massey and May (2005) contend that World Bank's failure to leverage oil for development in Chad, through restructuring, mechanisms to improve transparency and revenue management, is testament to the limitations of good governance prescriptions. Authors, such as Phillips et. al. (2015), believe that the Chadian example is testament to the influence of political economy factors, arguing that Chad's post-colonial history, marked by factionalism, instability and violent conflict undermined the potential for governance reforms to positively influence the development trajectory. The authors contrast Chad's political economy with that of Ghana, noting that "the Ghanaian polity is closer to a Weberian rational-legal ideal, presiding over a formally liberal market economy marked by respect for the rule of law, a history of democratic transitions of power, a stable parliamentary democracy, and a 'functioning' civil society" (Phillips et. al. 2015, p. 3). In turn, their observations suggest that Ghana's experience with oil is likely to be more positive. Chad experienced negative social and environment impacts, conflict, and severe economic mismanagement (Carmody, 2009). Meanwhile, a decade after first oil, Ghana has not experienced negative effects on the same scale, although it is arguable that the current level of oil production is not significant enough to engender resource curse symptoms or Dutch Disease. My thesis also draws heavily on more recent literature, notably that of Tordo et. al. (2013), Henisz et al. (2014) and Andrews & Playfoot (2015) in which the authors make important contributions concerning the positive impact of a movement towards localisation and understanding the historic issue surrounds its development and adoption.

2.7 Research Framework and Questions

My research problem concerns the role of operators in adopting and developing local content which in turn is part of a series of interactions between the institutions of government and third parties, such as donor agencies. As such, I situate my research within institutional political economy theory, a framework which broadly emphasises the role of historical and socio-political factors in the evolution of economic practices. This thesis also looks to

contribute to institutionalist political economy theory by demonstrating how economic, political and societal factors interact and influence local content adoption and development.

This branch of political economy theory is primarily concerned with the interaction of decision-making units, such as firms, the state, and foreign states, and - through Austrian sociological contributions to institutionalism - individual actors. My study is characterised by multiple stakeholders, some MNCs, some individual actors seeking to earn a living from Uganda's oil and gas industry, as such it is necessary to theorise that all stakeholders are subject to institutional restraints. Interactions between stakeholders are not defined purely by the economic self-interest of the engaged parties. Instead we must observe, as North (1990) notes, the human devised constraints (institutions) that structure human interactions. The following section analyses the relevance of institutionalist theory to this study and concludes by presenting my research questions.

2.7.1 The Role of the Political Economy Lens

The nature of this thesis, exploring the roles and actions of stakeholders in a complex and regulated environment, lends itself to a political economy lens. Political economy analysis is concerned with the political and economic processes within a society and "assessing the distribution of power and wealth between different groups and individuals, and the processes that create, sustain and transform these relationships over time" (Collinson, 2003, p. 3.). Gabbie (1995) suggested that there are a number of fundamental assumptions which exist within political economy studies. The first of these is that political and economic processes are interlinked and should be studied as an interrelated subject matter rather than as separate spheres, regardless of the fact that politics and economics remain analytically distinct. A second assumption is that an in-depth appreciation of the political requires delivering explanatory weight to economic conditions and processes. The final assumption is that the political economy framework exists not only to help explain how a particular political-economic system works, but how it might work and how it should work.

Political economy theory emerged as a prominent informer of policy discourse in the latter half of the 20th century and can be seen as a fusion between the empirical nature of economic theory and the development of behavioural sciences (Ordeshook, 1990). It represented a major change in mainstream thinking in economics as discourse has moved towards improving our understanding of the broad spectrum of intertwined political, economic and societal factors and away from the principals of effective demand that underpinned the predominant Keynesian economics in the post-war era and the later Thatcher Revolution. As noted by Besley (2007), the emergence of political economy as a leading branch of social science is not solely based on a need for a greater understanding of contemporary economics but the desire to “generate new, policy-relevant insights” (Besley, 2007, p. 585). Furthermore, rather than the conventional economic debate around optimal market intervention, the political economy field of study is relevant to a broader range of topics including institutional design, policy implementation and political settlements.

The modern interpretation of the political economy lens represents a distinct and competing approach to economics. Classical references to political economy, most notably through authors such as David Ricardo and Thomas Robert Malthus, were often deductive in a manner reminiscent of modern mathematical economics, as such the findings were more universal and lacked explanation of non-mathematical causality. Besley (2007) concurs, highlighting that some aspects of traditional political economy paid little attention to the selection of politicians and the institutional frameworks which supported them; instead, a more grounded approach is required for my research. My case study looking at local content adoption and development is more than purely an economic issue. In this thesis, the role of institutions along with other political settlements, historical and societal factors will be considered as influences in Uganda’s local content story.

As discussed in the literature review, many studies broadly concerning value creation are situated in the resource curse-good governance nexus (Strauss, 2000; Gylfason, 2004; Mehlum et al., 2006; Humphreys et al. 2007), although more recent literature concerning ‘Thinking and Working Politically’ promotes a more politically-informed approach

to development studies as a whole (Dasand et. al., 2019). For my study, delivering more meaningful research findings requires a robust theoretical framework which allows for explanatory insights into the roles and actions of individuals and organisations in society. As such, the institutionalist branch of political economy theory is broad enough to conceptualise the interactions of multiple stakeholders yet deliver a framework for detailed engagement with research data.

2.7.2 Institutional Political Economy

Institutionalist political economy, also known as institutional political economy, refers to a body of political economy stemming from seminal works of institutionalists such as Veblen, Mises, Commons, Mitchell and Dewey. An institutionalist approach to political economy does not reject the dominant neoliberal theory in its entirety but emphasises the importance of institutions as well as political and societal factors (Acemoglu & Robinson, 2012). Theorists, such as Elliot (1978), contend that institutionalism is reflective of the shift from laissez-faire capitalism to modern capitalism, a state in which institutions are major actors.

In acknowledging the predominance of institutions, the political economy of institutionalism describes a system in which states represent a number of formal and informal institutions. Collectively these institutions, which in my case study are the Ugandan ministries and departments broadly responsible for oil and gas and the sector's development, define the rules of the game, whilst non-state organisations are the players of the game (Moon, 2007). However, in developing Moon's contributions, I contend that institutions of government can also be influenced by industry players, such as oil companies or oil-field service providers, and by multilateral / donor organisations, such as the World Bank, the IMF or the UK Department for International Development (DFID).

Whilst the above characteristics of modern capitalism may not be applicable to all underdeveloped states, some nations, like Ghana, are closer to a Weberian rational-legal ideal (largely defined by the characteristics of modern democracies) than a nation like Chad. Uganda, although by no means a beacon of Weber's rational-legal ideal, has a

strong bureaucratic tradition, albeit often undermined by President Museveni's discretion, and this bureaucratic tradition has been expanded to Uganda's nascent oil and gas industry through the implementation of the Norwegian Model of resource administration. Secondly, local content itself is increasingly highly regulated, further enshrining the role of institutions. Resultantly it would be incorrect to view my case study through a prism of neoliberalism, under free market conditions and a weak state.

The remainder of this section highlights the relevance of institutional political theory to this study but also underlines important differences with neoliberal theory and political settlement theory, both of which have been used by other authors in similar studies (such as Hickey & Izama, 2017). More broadly, this work highlights that local content should be viewed through the prism of institutionalism and that leaving local content to free market mechanisms prescribed by neoliberalism is conducive to severe market inefficiencies. In this section, I discuss the application of institutional political economy to four features of this study. Firstly, I assess theory concerning the developmental state followed by (secondly) the application of ignorance, or information asymmetry (the notion that all parties are not perfectly informed), in causing market failures. Thirdly, I address the relevance of sociological concepts, embeddedness and isomorphism and their impacts on business and individual behaviour. Finally, I discuss the application of institutional political economy theory to the context of underdeveloped and developing nations, with particular attention to Acemoglu & Robinson's (2012) work on 'inclusive' and 'extractive' institutions.

2.7.2.1 The Developmental State and Local Content: The Rejection of Spontaneous Order

Most importantly for this study, institutionalism rejects the neoliberal notion of spontaneous order, with academics suggesting that the developed capitalist markets of the modern day did not spontaneously emerge without state intervention. It can be argued that the IMF and World Bank structural adjustment programmes required a considerable state intervention to encourage free market economics, while, Chang (2001) contends

that Hong Kong may be the only nation which became industrialised without substantial state involvement. Mazzucato's (2011) work on entrepreneurial states delivers similar conclusions around interventionism, highlighting the role proactive and dynamic governance can play in creating opportunities in sectors where business has not realised its potential.

Throughout this study, I assert that dynamic and proactive interventionism, consistent with a developmental state, is an integral factor in the timely development of a localised oil industry. By contrast, Hayek (1979), whose writings are considered critical to neoliberal theory, postulates that a central challenge of liberalism was to make the government a servant to spontaneous order or free market conditions. As such, a critical construct of neoliberalism is the rejection of dirigisme (a strong, directive state), resultantly, neoliberal prescriptions in Africa have centred on the role of laissez-faireism (Adino & Nebere, 2016; Harrison, 2013). Because of this, neoliberal theory, a construct which promotes free market mechanisms, is not consistent with the topic of local content and the highly regulated environment which is commonplace in nascent oil and gas industries.

Like Chang (2001), Krugman's (1992) critique of neoliberalism poses that dirigisme has been central to the success stories of the 20th century. He proposes that the experiences of the "Four Tigers" have been refracted through the prism of neoliberalism, even though they were far from paragons of laissez-faire economies. Mkandawire (2001) notes that the general conclusion of 'revisionist' literature is that "market failure" is prominent in development economics to the extent that it is still a problem that warrants government intervention; as "failures" differ in intensity, scope and location, a selective set of interventions is required.

Mkandawire (2001) contends that the central role played by a "developmental state" in the process of development, notably across the African continent, is the most significant lesson that has been learnt in the latter half of the 20th century. As such, the interven-

tionist principles within institutionalism respond to a realisation that laissez-faire economics is not the panacea to development challenges. We can observe, primarily from prophetic examples throughout the Global South, that the adoption of neoliberal free market conditions (notably in the context of globalisation), has not brought the anticipated benefits for indigenous industry and people. It can be argued that this is because the neoliberal approach does not support and protect local people and their companies in the domestic economy, whilst providing unconstrained access to more developed MNCs; this is corroborated by Siddiqui (2012). Siddiqui (2012) takes the example of Ecuador, among others, suggesting that neoliberal resource policy meant that foreign oil companies profited instead of the host nation itself. The above criticism of neoliberal prescriptions in resource industries is reinforced by the notion that market failure can be more acute in underdeveloped economies.

Institutionalist theory of political economy, characterised by elite and bureaucracy-led interventions and the creation of stronger institutions to foster economic and human developmental performance, lends itself to any discussion on local content and arguably depletable resource studies. The need for greater state intervention, not only regulation, is in part, owing to the examples of other oil rich states, predominantly of the 20th century. These nations, such as Nigeria and Venezuela, allowed their nascent industries to develop in the absence of requisite interventions that may have seen greater economic benefit to the host nation. As such, it seems necessary to challenge the anti-dirigisme which is embedded in neoliberalism and accept an institutionalist approach and the more dynamic role that the state can play. Mkandawire (2001) points to the challenges that an interventionist state can address, including “human capital; possibilities of the state “crowding in” private investment; market imperfections and failures” (Mkandawire, 2001, p. 293), and thus highlighting dirigisme’s role in correcting market failures. With regards to local content, it is clear that dynamic state intervention, beyond that of a purely regulatory role, can be utilised to expedite capacity development initiatives and correct market inefficiencies.

In summary, a primary reason for choosing an institutionalist framework for this research is that local content, its regulation and development interventions do not sit well within neoliberal theory of spontaneous order. The notion of the ‘developmental state’ breaks further from the neoliberal reliance on laissez-faire economics, characterised by strong state intervention, extensive regulation and planning; arguably features that are required to actualise Uganda’s local content objectives. Developmental state policies in the oil and gas industry largely resemble ISI (Import substitution industrialisation), regulating to inhibit foreign imports in order to aid the development of indigenous capacity. As Andrews and Nwapi note, developmental state policies in the oil and gas sector employ a number of instruments “such as subsidies, protectionism, and creating cooperative relationships between business and financial institutions” (Andrews and Nwapi, 2018, p. 55). This, in turn, bears resemblance to the East Asian examples of the developmental state, in which the states employed ISI to allow nascent manufacturing sectors to develop. The authors contend that Uganda, along with Ghana and Mozambique to differing degrees, is regarded as a potential developmental state because of its adoption of “LCPs and mechanisms with the objective of ensuring greater participation of their nationals in the sector” (Andrews and Nwapi, 2018, p. 50). Andrews and Nwapi come to similar conclusions in their discussion about Ghana; the authors contend Ghana has emerged as a petro-developmental state through its objective to use the oil industry to advance broader development objectives. State intervention to raise local content is particularly consistent with the Weberian notion that ideal interventions would revolve around a social good or positive societal impact (Johnson, 1982; Woo-Cumings, 1999). Andrews and Nwapi (2018) claim that the implementation of LCPs often contravenes international trade rules on fair treatment, although the home governments of IOCs are unlikely to challenge host governments given the importance of resource industries to their development.

2.7.2.2 Recognition of Ignorance as a Cause of Market Failure

Like neoliberalism, institutionalism’s theoretical robustness is furthered by its ability to thrive on imperfection (Boettke et al. 2004). Mises (1920) and Hayek (1945) both took

issue with the unachievable and unrealistic assumptions of their socialist counterparts, notably the ideal of omniscience. Their attention to the role of information and ignorance is of value for informing the causes of market failure; specifically to my study, this is the failure of the free market to bring about localisation. Information is important not only to people but to firms who require information about material and immaterial inputs, politics and business cycles. Hayek postulated the existence of less than ideal conditions, allowing the researcher to determine to what extent the case study retains desirable attributes, such as the extent to which institutional processes predominate over the discretionary power of the executive body.

In this thesis, I investigate market failure in education and training, assessing the discrepancy between industry requirements for human capital and the capacity of universities and colleges to tailor their offerings to students looking to join the industry. In such an example, we can apply notions of ignorance and information asymmetry in understanding why the market for education and training fails to align itself with industry needs. There are also further applications of ignorance to this study, such as understanding why local firms may struggle to provide goods and services which correspond with operator and industry requirements.

2.7.2.3 Embeddedness and Isomorphism, Societal Factors Influencing Individual and Business Behaviour

An institutionalist approach normally takes issue with the neoliberal view of human motivation (Cullis & Jones, 1987; Chang, 1994a; Stretton & Orchard, 1994), specifically the Smithian notions that individuals are driven by economic self-interest and that alone. This indeed goes some way to explaining corrupt practices in nations like Uganda where institutional capacity is weak, however authors such as Khan (1996) suggests that corruption and clientelism is a perfectly rational outcome in primitive markets. In some cases, self-interest may refer to personal enrichment, but in other cases it represents a rational method to protect the ruling position of a leader or political party when

the economy is not developed enough to yield tax revenues. It is clear that a more complete understanding of elite action, including corruption, and the reasoning behind it requires more detailed interpretation of the social, economic, political and other stakeholder pressures on the individual, such as that provided by the institutional theory framework.

Boettke & Storr (2004) noted that Weber is an important contributor to modern institutionalism and much of his work on social phenomena and the meaning people attach to their own activity also informed the Austrian theorists, Hayek and Mises; “the Austrians share Weber's commitment to the method of *Verstehen* (i.e. understanding action from the actors perspective) and his conceptualisations of economy, society and polity and the relationship between them” (Boettke & Storr, 2004, p. 178). Correspondingly, the institutionalist approach rejects atomic individualism, a notion originally proposed by classical liberal, Smith, in favour of the notion of social embeddedness, the recognition that all economic activity depends upon the social context in which it takes place (Granovetter, 1985).

The concepts of embeddedness and isomorphism (the process of entities adopting similar positions) are both central parts of institutionalist thought, as both concepts aid praxeological discourse (i.e. understanding the reasoning for human action) on economic activity and the effectiveness of state intervention. In this thesis, we can apply the ideas of coercive isomorphism (isomorphism induced by regulators) and mimetic isomorphism (induced by competitors) to the context of a highly regulated market, in which multiple oil operators utilise varying business models and attitudes towards local content. It may be the case that both forms of isomorphism can simultaneously influence operator adoption of local content.

A more specific application of embeddedness, as noted by Fengru & Guitang (2019), may refer to the closeness of interpersonal relationships and social ties MNCs have established with local communities, a notion that has particular relevance to this study on

local content. Sardan (1999) speaks of the embeddedness of corruption and its prevalence in African societies. As such, it may be the case that in societies where corruption is prevalent, engaging in corruption, either as an individual or a business, may be seen as being embedded. Meanwhile, authors such as Bayart (1992) claim that corruption is not an impediment to business but allows transactions to take place despite the odds, greasing the proverbial wheels, sometimes of inefficient bureaucracy.

In summary, one of the ways in which institutionalism differs from liberalism is through the central role attributed to sociology in institutional theory, a feature which is particularly important to my study. Misesian contributions to institutionalism centre on the axiom that individuals engage in conscious actions towards chosen goals and is situated within an understanding of political, economic and societal action. Attention to embeddedness and other social phenomenon is invaluable in providing the conceptual basis for interpreting how the stakeholders investigated in this research situate themselves and interact in Uganda's political economy. Embeddedness, taken together with the concept of isomorphism, allows us to build a broad understanding of the factors that influence the economic practices of the stakeholders in my case study. With regards to isomorphism, we can theorise that IOCs and foreign firms in a host country are also influenced by external pressures brought about by governments and indigenous people. As Escobar and Vredenburg (2010) note in their study of IOCs and the adoption of sustainable development goals, MNCs' actions are influenced by external pressures (Clarkson, 1995; Freeman, 1984) including governments (through regulations), industry (through standards and norms), competitors (through better business models) and consumers (through loyalty). This notion is enshrined within the work of Mises (1949), who noted that actors may change their ideology or approach when convinced that said change will best serve their interest, be it altruistic or not. Indeed, both isomorphic pressures and embeddedness are important parts of institutionalist theory which can be used to explain the practices of stakeholders, notably oil operators.

2.7.2.4 Institutional Political Economy Theory in an Underdeveloped Nation Context

In the latter part of the 20th century, traditional donor and multilateral organisations such as the World Bank and the International Monetary Fund promoted neoliberal prescriptions and free market reforms across Africa and the Global South. Resultantly, developmental states, which are often consistent with institutional political economic theory, are a rarity on the African continent, with contemporary Ethiopia being the most obvious exception (Clapham, 2017). However, I believe that the institutional political economy lens is increasingly relevant as development economics has become more focused on the strength of institutions and their role in defining development outcomes.

The case study for this thesis is even further removed from free market prescriptions in Africa. As discussed, Uganda's oil industry is highly regulated and the government has sought to demonstrate a commitment to a robust administrative structure and legal framework; as Hickey and Izama (2020) note, Uganda has been praised for its adoption of the Norwegian Model. As such, it is sensible to conceptualise this study within a theoretical framework that emphasises the role of institutions in determining outcomes and understanding the actions of organisations and individuals. Consequentially, the type and quality of the institutions are of particular importance.

Acemoglu & Robinson (2012) propose the existence of 'inclusive' and 'extractive' institutions. Whilst inclusive institutions encourage participation and promote development, extractive institutions allow elites to rule and exploit the greater populace. Acemoglu & Robinson's example of 'les Grosses Legumes', the sardonic Congolese nickname for Mobutu Sese Seko's clique who governed at their discretion for decades, amassing great personal fortunes, delivers an important point of comparison for this study of neighbouring Uganda as it embarks on its resource governance journey. In the context of development studies, inclusive institutions can also be observed as 'pockets of effectiveness' (PoE), loosely defined as public organisations which deliver public services effectively in the context of largely ineffective government (Roll, 2014). Due to their effectiveness, these institutions, be they organs of central government, local government or academic and vocational institutions can make an important contribution to development agendas.

The application of institutionalist theory in underdeveloped and developing nations provides a mechanism to evaluate why the factors relating to the political economy can betray national objectives. Conceptualisations, such as that of extractive institutions go some way to delivering an in-depth understanding of a phenomenon which frequently puzzles outsiders, “namely why African governments simply do not implement the right policies to benefit from extractive FDI” (Hansen et al. 2014, p. 20). Hansen et al., in their study of three East African nations, note that “an important explanation of why local content policies and practices often fail to be implemented in the three countries is that they become mired in political processes in general and the ruling coalitions’ pursuit of power in particular” (Hansen et. al., 2014, p. 17). More specifically focusing on local content, Acemoglu and Robinson’s (2012) work reinforces the challenges of actualising inclusive local content, as extractive institutions can be a vehicle to provide political elites the opportunity to profit and to consolidate the support of powerful business elites and reward politically connected firms, broadly referred to as local content capture. According to Weimer et al. (2012) and Buur (2014), such practices are taking place in Mozambique, one of East Africa’s most hydrocarbon endowed nations, whereby elites close to Frelimo are positioning themselves to capture the local content market in services and linkages to an extent where it has blocked further development of the SME base. Consequently, an institutionalist approach is not purely prescriptive of interventionism in a case study such as this, but it aims to deliver insights into why national objectives may not be best served when extractive institutions are present.

This study also contends that, through the prism of institutional political economy, the notion of the developmental state can be consistent with the mechanisms required to increase or improve local content levels. Previous applications of the developmental state have sought to protect and develop nascent sectors, allowing them to grow and become internationally competitive. In a very similar manner, I believe that through regulation and proactive interventions, localisation objectives can be achieved. This thesis, through the case study of Uganda, is illustrative of the inefficiencies and market failure

that can occur if free market mechanisms are allowed to determine the trajectory of local content. I also focus on the dynamic and proactive interventions of donor and development agencies in Uganda; their successes in developing Ugandan content provide further credence to the relevance of interventionism and a developmental state approach to local content.

Finally, other authors, such as Hickey et. al. (2015), use political settlement theory in similar political economy studies on Ugandan oil governance and I will also utilise this theory in a limit and specific way. Whilst most of this thesis focuses on business models, state administrative process, implementation of policy and relations between economic actors, on a number of occasions Uganda's President Museveni has demonstrated a willingness to involve himself in policy design and negotiations. In these cases, political settlement theory is useful to conceptualise Museveni's actions and improve understanding of high-level power arrangements in Uganda's oil industry.

Political settlement theory (Kahn, 2010) argues that the distribution of power is important in understanding economic and political outcomes. The study acknowledges the role of underlying power arrangements, particularly when the executive body, along with other elites, displays a degree of discretionary power. Mohan et al. (2018) contend that the role of elites is often amplified when the topic in question involves international bargaining between nation states. This notion is undoubtedly applicable to Uganda as we can observe that President Museveni has taken a leading role in negotiations with international operators. The application of political settlement theory revolves around the understanding of the type of power arrangement, which in turn informs a deductive approach into the role of elites in development. Kahn (2010) broadly classifies political settlements according to two criteria, alignment with growth and implementation capabilities. Uganda's political settlement is characterised by an elite aligned with growth but waning implementation capabilities, a concept that will inform further discussion in this thesis. As will be discussed in later chapters, Uganda's political settlement does play an

important role in this research; however, the decision to situate this thesis within institutionalist political economy theory is due to the highly regulated environment which characterised local content and the need for an interventionist state.

2.7.3 Research Questions

Hypothesis: This thesis investigates whether a new environment for oil and gas operations has emerged, in which operators pursue localisation as a business model and not purely as a matter of compliance. In exploring whether local content is now an objective shared by operators and host governments alike, this thesis examines the mechanisms being utilised to achieve localisation goals and asks what factors, if any, can be attributed to the realisation of this objective.

In addressing my research hypothesis, I will address a number of questions to ascertain what constitutes this multi-stakeholder environment and how it is playing out in one of the world's nascent hydrocarbon economies. The research questions are as follows:

Question 1: Is there a new operating environment driving the development of a more localised operating model and can we isolate a turning point for operators in the adoption of a localised business model?

Question 2: What role are the leading stakeholders playing in local content development and adoption in Uganda and does the elaboration of this model differ between key corporations in the oil sector and other stakeholders in the local content landscape?

Question 3: What role does the political economy of Uganda play in the realisation of local content objectives?

These questions have been formed following extensive assessment of the existing literature, both theoretical and work relating to local content. They are built upon the work of authors such as Pegram et. al. (2018) and Andrews & Playfoot (2015) who deliver important insights into local content within the oil and gas industry. Institutional theoretical

literature is also present in the questions; question 1, for example, draws heavily on work around isomorphism, notably the impact of the oil price crash in bringing about changes in the way the oil and gas community operates. Question 3 draws both on institutional work, such as that on 'inclusive' and 'exclusive' institutions, but is also heavily influenced by Hirschman's work which looked at the importance of creating linkages between the resource sector and the indigenous economy.

By answering the above three research questions, we can also learn more about the success of this multi-stakeholder environment and deliver lessons for other countries that follow in Uganda's footsteps. The below ancillary questions are answered throughout the thesis as this study's empirical findings are presented.

Question 4: How successful has this multi-stakeholder environment been in achieving the objectives of greater local content adoption and development?

Question 5: What lessons does Uganda's experience deliver for other countries' attempting to develop local content and increase its adoption?

2.7.4 Conclusion

Whilst my research questions relate largely to the business model of operators, this thesis is focused on the interaction of multiple stakeholders in the development and adoption of local content. My research explores the processes taking place as Uganda's oil industry transitions through the oil and gas lifecycle and, in theory, becomes more localised due to increasing market pressures and regulation. A considerable focus of this work is investigating how the changing environment, both in terms of the market but also international relations in the case of donor agencies, influences the way in which stakeholders act and interact. These processes can be well explored through an institutional political economy lens.

3.0 Chapter 3: Fieldwork Process and Methodology

3.1 Overview

This study sought to explore a new landscape of local content adoption and development in the oil and gas industry and, through an abductive approach to case study research, addresses whether a multi-stakeholder environment is delivering greater localisation. This chapter considers the methodological choices and procedures required to undertake this research and analysis. It begins by underlining my theoretical approach to this research followed by an outline of my research design. Next, I present the process for fieldwork, the challenges of data acquisition, my positionality and ethical issues which were addressed. This writing will also introduce my case study and my field entry into the topic. In this chapter I also address definitional challenges, notably around the words 'local' and 'content'.

The fieldwork design was developed through a broad fact finding visit to Uganda in May and June 2018 which allowed me to obtain a great deal of grey literature. The visit enabled me to test the feasibility of the study and gave me the opportunity to further my local network, identify additional relevant stakeholders and to understand more about the current state of play in Uganda's oil and gas sector. No one was formally addressed with regards to the research project and all meetings and introductions were on the basis of my then role within the conference industry.

3.2 Theoretical Approach

My study aims to understand the political economy of institutions and corporations which requires a broader, structural comprehension of the topic as well as detailed agency-centred insights. By using both quantitative and qualitative research methods, it is possible to contribute to the field of knowledge through providing empirical evidence and insights into a particular development or phenomena, this is why I adopted a mixed methods approach. Traditionally, adopting a mixed methods design for conducting research has made it difficult to identify a corresponding philosophical paradigm (Johnson & Gray, 2010; Teddlie &

Tashakkori, 2003). Authors in the 1960s and 1970s considered that qualitative and quantitative approaches to research entailed differing philosophical and paradigmatic assumptions and this would therefore frame the research in ways that were not compatible with each other. I adopt a pragmatist research paradigm for this work as it advocates the use of a method and philosophy that attempt to fit together the insights provided by qualitative and quantitative research into a workable solution (Johnson & Onwuegbuzie, 2004), often seen as a middle ground between philosophical dogmatism and scepticism. As a result, it dismisses the traditional dualism (e.g. facts vs. values, subjectivism vs. objectivism, rationalism vs empiricism) and provides a 'freer' approach to problem solving.

Pragmatism rejects the notion that epistemology and method are synonymous and instead focuses on the characteristics of inquiry and not on a set of metaphysical assumptions about ontology and epistemology. It has frequently been recognised as the appropriate paradigm for conducting mixed methods research (e.g. Howe, 1988; Tashakkori & Teddlie, 1998; Patton, 2002; Maxcy, 2003; Teddlie & Tashakkori, 2003, 2006; 2009; Johnson & Onwuegbuzie, 2004; Onwuegbuzie & Johnson, 2006; Morgan, 2007; Denscombe, 2008; Scott and Briggs, 2009; Johnson & Gray, 2010; Creswell & Plano Clark, 2011) and sheds light on how elements of traditional approaches (positivism, interpretivism) can be mixed fruitfully (Hoshmand, 2003). As noted by Johnson & Onwuegbuzie, "the bottom line is that research approaches should be mixed in ways that offer the best opportunities for answering important research questions" (Johnson & Onwuegbuzie, 2004, p. 16) and this is what drew me towards the pragmatist paradigm.

Furthermore, the pragmatist approach complements my research's sequential explanatory design, allowing for the "possibility to work back and forth between qualitative data and quantitative data, which is often viewed as incompatible" (Tran, 2017, p. 75). This permits the researcher to utilise the deductive results from a quantitative approach to inform the inductive goals of a qualitative research phase, which is often referred to as an abductive process. As will be explained in further detail in the next section, I have adopted an abductive approach, drawing on data from the first questionnaire and interviews to inform the creation of a second questionnaire.

Pragmatism is also an appropriate paradigm for case study research. Creswell (2009), notes that pragmatism is based on the belief that theories can be both contextual and generalisable, rather than making research context-bound. This paradigm is particularly applicable not only to my research, but across the field of development studies, as the researcher should investigate the factors that “affect whether the knowledge we gain can be transferred to other settings” (Shannon-Baker, 2015, p. 4). Development studies is underpinned by the need to understand social, political and economic trends throughout the Global South, hence the need for transferability in research findings. Whilst transferability is associated as a strength of qualitative research (Lincoln & Guba, 1985), the pragmatist research paradigm’s transferability is strengthened through an abductive approach in mixed method research (MMR). Transferability of this study’s findings is also enhanced through its single case study design.

3.3 Research Design: Case Study

This research was comprised of a mixed methods approach in a sequential explanatory design, featuring two questionnaire and an interview phase utilising a single case study in delivering a detailed investigation into this multi-stakeholder environment and its impact on local content adoption and development.

I elected to undertake this research through the lens of a case study (Uganda), as single case study research can help us deliver in-depth understanding of a particular phenomenon or remarkable circumstance (Yin, 2013). The situation specific nature of the case study was once considered its downfall (Weick, 1969), because it is too situation-specific and, therefore, not appropriate for generalisation. However, in a revised work, Weick noted that the case study was a “better tool than first imagined” (Weick, 1979, p. 37), commenting that an understanding of the specific nature of the situation would enhance generalisation. By embracing the contextual conditions of the case study and utilising analytical generalisations, it is possible to extract results and ideas of a more abstract level that are transferable from one context to another (Yin, 2013). In addition, Flyvbjerg (2006) believes that the in-depth nature of case study research is effective in delivering the opportunity to address and test hypotheses. Because of these factors, case study research is perfectly

attuned with the aims of this thesis. In this work, the case study of Uganda allows us to investigate a new paradigm which I believe is playing out globally, and by paying particular attention to factors relating to Uganda's political economy, it is possible to isolate transferable aspects of this research.

Whilst the questionnaires provide a measure of the attitudes and opinions of the respondents, the interviews supplement the questionnaire data by providing additional in-depth insights to enhance our knowledge of processes and situational understandings. The questionnaires were prepared and reviewed by the Open University Human Research Ethics committee and disseminated to potential respondents in April and September 2019. I visited Uganda for my fieldwork in June and July 2019. The two / three months between disseminating the first questionnaire and visiting Uganda allowed time to analyse responses from the questionnaire and guide question development for the semi-structured interviews. The interview data, in turn, informed the development of the second questionnaire in September 2019.

3.3.1 Quantitative Research Phase

The first and last part of my research is formed around two questionnaires which delivered quantitative data in order to achieve an overall measure of the attitudes and opinions of the respondents. A major objective in the questionnaire design process is to reduce the possibility for error in participants' responses (Lavrakas, 2008). In heeding the advice of Meadows (2004), the questionnaires were formulated around well-worded and jargon-free questions which provided the respondents with simple ordinal answers to choose from. The first questionnaire aimed to receive responses from 80 participants and succeeded in reaching 78, including chosen respondents representing relevant arms of the government, the national oil company (UNOC and its subsidiaries), private and international oil companies, international donor organisations, Ugandan enterprise, as well as a number of relevant individuals who have been an integral part of policy development in Uganda. The first questionnaire was composed of 17 questions with respondents requested to answer on the Likert Scale (five-point scale, Strongly Agree, Agree, Neutral, Disagree and Strongly Disagree) and, as such, provided ordinal data. A pilot questionnaire was circulated to

friendly parties within the industry two weeks before the main collection phase, providing the opportunity to make any adjustments if necessary.

The second questionnaire targeted a smaller group of individuals, most of whom took part in the semi-structure interviews. 46 participants took part in the second questionnaire which consisted of seven 'Yes' or 'No' questions and a series of ranking/rating questions which requested participants to score each operator's commitment to certain criteria. The criteria in the questionnaire reflected this study's main component of local content, being employment, procurement and commitment to local content development (definition of local content introduced in 3.12.2); the ranking was scored 1-5. The second questionnaire proved to be particularly useful in supplementing the interview data to create a complete picture of perspectives and consensus.

The questionnaires were uploaded and disseminated from the online platform Jisc. Some authors note higher levels of sound responses when each question is placed on its own page as opposed to all questions being listed on one page (Vehovar, et. al., 2000; Tourangeau, Couper, and Conrad, 2004), although other research did not find the same correlations (Peytchev et al. 2006; Toepoel, et. al. 2008). I explored Jisc to understand which methods work better and elected to group questions depending on their context. As noted by De Bruijne and Wijnant (2014), it is realistic to assume that some respondents will take the questionnaire on their smart phone; as smart phones are vertically orientated, it is sensible to list the Likert scale horizontally. The Jisc programme provided participants with the opportunity to switch between vertically and horizontally orientated Likert scales.

De Bruijne and Wijnant (2014) contended that response rates are higher when the respondent is invited to participate by text rather than email, although most people are unlikely to want to receive unsolicited texts. Invitations to participate in both questionnaires were made across numerous platforms, including LinkedIn, WhatsApp, text message and email. Frequently WhatsApp proved to be more useful given the frequency at which the application is used in Uganda and the personalised nature of the contact. A number of the respondents came from my pre-established network, although I also used this network to identify further respondents and disseminate the questionnaires. Both questionnaires were

open for around one month. The first questionnaire closed three weeks before my field-work visit to Uganda and was analysed in order to inform and guide the qualitative research process.

3.3.2 Qualitative Research Phase

In the qualitative research phase, the data being obtained cannot necessarily be quantified or examined in terms of amount or intensity, therefore the emphasis must be on people, processes and situational understanding. Longhurst (2010) notes that talking with people is an excellent way to address gaps in knowledge whilst looking to understand motivations and complexing behaviours. The field trip to Uganda in 2019 was the main qualitative data collection phase and allowed me to continue my data collection in the form of face-to-face semi-structured interviews. The information collected through the first questionnaire provided limited experiential data, interpretations, and narratives about the development of local content in Uganda, as such, the interview phase augmented understanding in these key areas. Face-to-face meetings also provided the opportunity to develop mutual trust with the respondents, and potentially led to more openness and possibly more valid answers than an impersonal survey.

As recognised by Stake (1995), it is important that the researcher must retain some degree of flexibility during the interview process, allowing the interviewer to modify or even replace the original questions in mid-study. Participants frequently had a lot to say on the topic, resultantly I found that the conversations flowed more naturally, and I paid less attention to the planned direction of interviews. As the interviews varied with regards to time, and although a number of questions were shared for ethics approval, some degree of improvisation was required. Resultantly, the interviews took a semi-structured design with a pre-defined and peer reviewed list of questions at the core; these questions were shared with the Open University Human Research Ethics Committee in May 2019. These interviews were undertaken with a smaller cross-section of stakeholders than the first questionnaire; 36 interviews were conducted, all but one took place in Uganda.

The prepared interview questions have been included in the study's appendices. While the questions were altered slightly for each interview, because some questions were context and job-role dependent, the prepared interview questions focused on topics including operating models, stakeholder roles, Uganda's political economy and local content outcomes. Other questions were prepared specifically for people working in education, young professionals, and Ugandan supply chains. Interviews frequently started with a more general question, such as "Can you characterise the role of the operators in the development of local content?" or "What factors have hindered the development of indigenous capacity?" More specific prepared questions included "Do you believe that individual operator strategies have overlapped with other operators / oil field service providers in the country?" and "What is driving the involvement of NGOs, Development Agencies and Multilateral Organisations?" The questions were designed to respond to this study's research questions and reflected data collected in the first questionnaire. Many of the questions presented in the appendices then led to subsequent questions which weren't prepared; the aim was to get the respondent to elaborate and provide as much information as possible. Several respondents even asked themselves questions during the interviews.

Given the nature of the questions posed, addressing the role of relevant stakeholders in adopting and developing local content in Uganda's oil industry, it was necessary to ensure that experiential data, interpretations and narratives were collected from a reflective cross-section of stakeholders. Building on this, it was also important to take into account work on tautology (McCracken 1988), the interviewer must ask broad questions first in order to reduce the chances of writing up a tautology that simply reaffirms the interviewer's own assumptions. Although I endeavoured to conceal my own assumptions, it was clear that the respondents themselves already possessed strong opinions on the topic and were content to disagree with positively worded questions.

The semi-structured interviews took place with a variety of stakeholders, from the civil service, operating companies, oilfield service companies, donor agencies, academic institutions and Ugandan business leaders. The interview questions changed depending on the

participant and reflected their experience and involvement in the sector. Many of the individuals that I interviewed were senior representatives from both the public and private sector, so it was necessary to ensure that protocol was adhered to. When interviewing business elites, Schoenberger (1991) asserted that corporate interviews are often a fine balance between the interviewer, who creates the agenda for the interview and is therefore generally in greater control, and the respondent who, in the case of elites, is often used to exerting control and authority over others. An important consideration highlighted by Schoenberger (1991) and corroborated by Aberbach & Rockman (2002), suggests that elite subjects prefer not to be asked closed questions. Schoenberger contends that “respondents are likely to feel less frustrated if they are able to explain exactly what they mean in their own terms rather than trying to fit themselves into the terms of reference proposed by the researcher” (Schoenberger, 1991, p. 183); as such the interviewer should aim to achieve a conversational flow, providing open-ended questions followed up with closed-ended questions when clarity is required by the researcher. At all stages I endeavoured to conduct my interviews with Schoenberger’s conclusions in mind.

3.3.2.1 Situatedness and Positioning in the Field

All knowledge is situated knowledge, in that it is context specific (Berger & Luckmann, 1966; Smith, 1974; Haraway, 1988; Harding, 1991; Bourdieu & Wacquant 1992) and as such the researcher must act as a self-aware modest witness (Haraway, 1988). In expanding on this notion, it is important to be aware that humans are fundamentally relational and their responses are socially situated; societal norms, workplace hierarchies and power structures all bear influence on the nature of context. Therefore, the researcher must be aware of the social influences (such as pressure to maintain the company line, to not talk pejoratively about partner organisations or more importantly, the Ugandan government) on all respondents in order to enhance the rigour and validity of the research process (Vannini, 2008). As such, I ensured that privacy was maximised during the interviews themselves and that the respondents were confident in their anonymity, this was important in obtaining valid and true data. It is also important to note that many observers agree that it would be impossible to receive qualitative data from respondents which are objective in

the truest sense. As such respondent data sets were not viewed as one unified entity, but instead a collection of fragmented responses.

3.4 Research Participants and Recruitment Process

Whilst a number of respondents came from existing networks, I used LinkedIn as well as formal processes to engage people to take part in the research. Organisations included the Ugandan state and relevant arms of government, donor organisation, major international operators such as Total E&P and Tullow Oil, the Chinese national oil company, CNOOC, and lesser-known operators such as Oranto Petroleum. The study also engaged oilfield service companies, indigenous suppliers and academic and vocational institutions. The age range of participants varied greatly although I endeavoured to engage senior personnel where possible. Meanwhile, younger participants had greater capacity to discuss their experiences in education and training in Uganda as it was likely to have been more recent than elder respondents.

The sampling strategy largely revolved around working with my pre-existing network, developed in the conference industry, as well as by introducing myself to selected individuals via LinkedIn. Contacts assisted me in sharing the questionnaires with people identified as appropriate to take part; some contacts also shared the questionnaire with people they considered appropriate. While most of the interviewees were among those who took part in the questionnaire and indicated they would like to take part in the interview process, others were introduced by existing contacts purely to take part in the interviews. A number of people who took part in this study had previously worked for oil companies or the government (or both) and have since become consultants as the industry in Uganda slowed down. In order to protect their identity, some have been labelled as 'former employee' as other ways of describing them may compromise their anonymity.

3.5 Field Entry and the Selection of Study Areas

The topic of local content first became of interest to me in 2015 when I began working for a company which delivered conferences that addressed education, training and the topic

of localisation in the oil and gas industry all around the world. I joined the company during the oil price crash which started in 2014 and whilst working there the world saw oil prices fall significantly to a level not seen in decades. Whilst this had immediate consequences for our business, especially as many oil companies imposed bans on non-essential international travel (conferences being the prime example), after the industry's shock had passed, we (the company) noticed a change in the way in which operators approached their involvement in the conferences. In the past, operators had seen the conference as an opportunity to improve the mechanisms by which they trained their staff, regardless of nationality, and improve the onboarding mechanism (the mechanism through which new employees acquire the necessary knowledge, skills, and behaviours in order to become effective organisational members and insiders), whilst government participation was sporadic. However, from 2015 and 2016, operators had a new interest, using the conference as a platform to advance broader local content objectives. It was clear to my colleagues and I, that the increased commitment of operators, along with the growing role of donor agencies and the increasing interest of governments had the ability to deliver a significant change in the effectiveness of local content development and adoption.

Whilst the oil price crash of 2014 to 2016 impacted the oil industry globally, we believed that these events had the most profound effect in nascent hydrocarbon producing economies and frontier markets. In these nations, like Uganda, Tanzania, Mozambique and to a lesser extent Ghana, the prospect of developing a localised industry existed, whereby long-term operating costs would remain competitive in the context of an uncertain global oil price. Having run these conferences around the world, I was taken aback by the accessibility and commitment of stakeholders in Uganda in particular. Upon deciding to pursue this topic further, I had no hesitation in choosing Uganda as the case study for this research. I should add that I had also considered exploring this topic further in Mozambique but had been warned by colleagues in the industry that Mozambique does not offer the same transparent platform for undertaking research and, as a non-Portuguese speaker, I may encounter other challenges in translation. The geography of Uganda, notably its landlocked state, also presents a unique challenge for oil and gas operators and their extensive supply chains. This challenge is one which cannot be, at least partially, overcome

through the movement of maritime / offshore oil and gas assets (oil platform / floating production storage and offloading (FPSO) unit) and their personnel, as could be the case with offshore hydrocarbon finds, such as those in Ghana or Mozambique. Instead, Uganda required significant infrastructure investments to extract and deliver the hydrocarbon products to market, which, in turn necessitates the utilisation of local content.

My first visit to Uganda in May 2018 reaffirmed my belief that the commitment to local content and its development was genuine among the Ugandan government and stakeholders operating in-country, which, historically, had not been the case in a number of Sub-Saharan resource endowed nations. Whilst the country represented a welcoming prospect for my study, a number of challenges had to be overcome before commencing the research and undertaking fieldwork.

3.6 Research Challenges

Given the often-secretive nature of the oil industry and the lack of transparency normally associated with Sub-Saharan government dealings in the resource sector (Obi, 2007), I was aware that there may have been reservations around gaining access to key stakeholders in Uganda. These concerns could concern difficulties scheduling interviews with potential respondents, the respondents' trust in the researcher and whether respondents were happy to have their responses recorded and analysed. As noted by Tourangeau et al. (2000), a perception of sensitivity and divulging answers to a third party can easily lead to a low response rate or reluctance to be interviewed, or more importantly, dishonest and socially desirable responding (Zerbe and Paulhus, 1987). In order to overcome these challenges, I leaned heavily on my pre-established network and used their assistance to further disseminate the first questionnaire to relevant stakeholders and reach new stakeholders.

Overall, there proved to be very few manifest challenges during the research process. Ugandans were very keen to take part in the research, as were international participants. In hindsight, pre-interview contact with the interviewees themselves (as opposed to setting up interview through secretaries) may have been particularly beneficial in creating a closer

relationship, which, in turn allowed for more honest responses. This was reinforced by one particular experience; I was invited to a conference / seminar sponsored by the African Development Bank whilst I was in Kampala; although the vast majority of attendees were keen to talk with me, a very small number of people were also suspicious and even physically moved to cut me out of conversations.

According to Yin (2014), field procedures can be enhanced through the best possible preparation. I endeavoured to make use of this technology wherever possible as research highlights the physical challenges of undertaking qualitative study and the considerations of using an audio recorder (Ablo, 2016). One lesson identified from the visit to Uganda in May 2018 was the disturbance caused by the background noise of Kampala's streets and its likely presence on the audio recording. Despite many of the offices I visited being many floors above street level, the sound of the traffic and general busyness of Kampala was definitely a distraction. In responding to this, many of my 2019 interviews took place inside a city centre hotel, either in an office or the hotel gardens, far away from street noise.

3.7 Data Analysis

All data was saved to an Open University drive and access reserved for the principal investigator.

3.7.1 Questionnaire Analysis

Data analysis refers to the sifting, assimilating, modelling and transforming of data collected by the researcher. Before the analysis can begin, it is important that the data is in the right format for analysis. In this study, the Likert data was analysed on Jisc software and exported to Apple Numbers for further interrogation. In order to analyse the ordinal data received from the Likert questionnaire, it was necessary to undertake statistical testing. As the data is ordinal, distribution free and non-parametric tests were relevant. Statistical tests were carried out in order to ascertain P-values, analyse variances in participants' responses and measure how responses vary across organisational subcategories.

Central tendency cannot be measured by the mean, only by median and mode as the distribution of values on the Likert scale are not compatible with each other (Boone & Boone, 2012). Resultantly I assessed the trends using modal data to present descriptive statistics and inferential statistics for selected questions. The data was utilised as part of a pattern matching analysis as noted below.

3.7.2 Interview Analysis

Responses from the semi-structured interviews were transcribed using Temi software. The automated service made a fair attempt at transcribing the interviews, however, there were considerable errors and the process of correcting the transcriptions took over six weeks. It became clear that a mixture of strong accents and technical language made it difficult for the automated transcription service, with common words often exchanged incorrectly, even for expletives. Transcribed interview data was then entered into NVivo software. NVivo provides a place to organise, store and retrieve data, allowing the research to work efficiently, save time and rigorously back up findings with evidence. Specific responses and comments were extracted from the data and categorised according to the nature of the answers and used to address my research questions.

Interviews are useful ways of accessing various stories and narratives through which people describe their world and can be interpreted through a combination of literal, interpretive and reflexive models (Mason 2002). I assessed the qualitative data through literal and interpretive methods, allowing me to read the data literally, as well as reading the transcripts for what I think they meant (interpretive). Because of this, and as noted by Miller & Crabtree (1999), I endeavoured to be self-aware of any of my own biases and preconceptions and where possible, consulted others to find alternative interpretations, particularly when using the interpretive method. As the process of reading through the data and interpreting the interviews and field notes continued throughout the project, my position adjusted when additional concepts, requiring of further exploration, emerged; this is what Parlett & Hamilton (1976) term 'progressive focusing'.

According to Yin (2014), pattern matching is the most desirable analytical method for case study research and is the core procedure of theory-testing with cases (Mills et. al., 2010).

The analysis for this research focused on pattern matching in order to assess the validity of the theories and ideas hypothesised against the data acquired from the questionnaires and interviews. In the case of strong correlations between the theory and the data, there is a strong basis for valid inference. I believe I was able to objectively observe the workings of the case, whilst simultaneously recording developments in the case study but also examining its meaning. Throughout the analysis, this study referred to secondary data from grey literature, news articles and official records, which also required analysis for accuracy. The data obtained in the questionnaires and the interviews were also assessed in the context of the official statistics, publications and operator data. It is worth noting that some Government of Uganda statistics and those espoused by government officials were irregular and required substantial crosschecking.

3.7.3 Coding Data

When all the data had been collected, I undertook the process of coding interview responses and triangulating coded interview data with questionnaire data. The NVivo programme allowed me to create specific codes which collated themes identified within the interview data. There were 24 codes created on the NVivo platform and they were simply named according to their content, such as “Operator attitudes towards local content” or “fronting” – the latter of which contained responses linked to the practice of fronting which is discussed in chapters six and seven. These codes contained responses from the interview data, some more than others. The codes were eventually grouped around key themes, including education and the impact of the delayed development project, loosely allowing for research chapters to develop. Over time these themes developed and were narrowed down further to create the empirical chapters five, six and seven of this thesis.

3.8 Ethical Considerations

The ethical considerations for the researcher were mainly concerned with the conduct of the researcher and informing participants correctly. The research process took into ac-

count any ethical considerations and looked to respect confidentiality, privacy and consent, among other concerns, as recommended by Dowling (2010). Due to the secrecy of the oil industry and the lack of transparency often associated with underdeveloped and developing nation government dealings in the resource sector, steps were taken to ensure the anonymity of participants at all stages of the research process. Some respondents wished to be named in research, however it was decided that consistency should be maintained throughout. Further details on obtaining valid consent are noted in the sections below.

Due to the nature of the study, no harm or risk came to those who participated in the questionnaires and the interviews. An ethics review was undertaken by the Open University Human Research Ethics Committee and received their approval. A further ethics review was undertaken by the Makerere University School of Social Science Research Ethics Committee and received their approval.

3.9 Consent

Valid consent was obtained through the dissemination of consent forms to interviewees and those undertaking the questionnaire in accordance with the Open University compliance process. By gaining valid consent and avoiding any forms of deception, I guaranteed that no personal or professional harm came to those providing data for this study. The information sheets were disseminated with both the questionnaires and separately with the interviews (available in Appendices, Figures 2 and 3) and highlighted the aims and purpose of the research as well as the reasoning for that particular participants involvement as a subject for the questionnaire or interview. Furthermore, the consent forms included information regarding the participants' right to withdraw from the research at any given time and the proposed dissemination of the research findings. In the case that the respondents wished to change their answers or to withdraw completely from the research, the form included contact details of the researcher and research supervisor so they could do so. No participants wished to withdraw from the research.

3.10 Confidentiality and Anonymity

All data captured from the questionnaires was de-identified and analysed accordingly. For the purpose of the interviews, names of the respondent have not been publicised even when some respondents elected to share their name and role on the interview recording. The anonymity of the participants is naturally an ethical issue that must be approached properly but given the nature of the topic and the exploration of the role of various actors in the new operating environment, it is beneficial that some form of identification remains (i.e. by organisation subsector). Correspondingly, when appropriate, limited information concerning the respondents has been revealed in order to provide context to their responses and comments. Furthermore, I endeavoured to make sure that interviews took place where the confidentiality of the respondent was ensured.

3.11 Risks for the Researcher

I accepted that the risk profile for undertaking research in Uganda was greater than many other locations. Although Uganda has enjoyed relative stability in the past two decades, it is hard to ignore some of the unsavoury events that preceded this and the brutality of previous regimes. Although the ethnically charged sentiments that were realised during the previous regimes are perhaps dormant now, as a man of obvious European descent I was wary that I am indeed an outsider or *Mzungu* (Bantu word referring to people of European descent or colloquially a “traveller”) in Uganda. My research did not intend to take the form of activism and I endeavoured to ensure respondents were aware of my impartiality and my role as an observer of local content in Uganda. I found no challenges related to my personal safety.

3.12 Definitional Challenges

3.12.1 What is ‘Local’?

Away from practical research considerations, defining what is meant by ‘local content’ was another challenge that needed to be overcome before commencing fieldwork. Existing research, primarily concerning local content policy, has raised definitional challenges (Nwapi, 2015a). It is clear that there is some ambiguity as the terms local and national are

often used interchangeably. Mifsud-Bonnici (2013) believes that local content is normally perceived as content on a national level; Pegram et. al. concur, concluding that “when considering terms such as localisation and local content, this study showed that ‘local’ is largely perceived as meaning ‘national’, and is not restricted to locally affected communities” (Pegram et. al., 2018, p. 174). In this study, respondents used the term ‘local content’ interchangeably with ‘national content’, correspondingly this study will not seek to separate the two terms.

However, it should be noted that perspectives on what ‘local’ means can vary. People living in proximity to extraction sites are often adversely affected by the environmental impact of the industry. If these local communities are adversely affected but do not see their communities benefiting in terms of employment and demand for local goods and services, it is likely that citizens of the region will voice their disillusionment. In examining this, Cust and Viale (2016) point to the development of a subnational resource curse, the Niger Delta being the prime example. As such, the negative effects of the oil and gas industry (particularly the more tangible effects such as pollution and crime) are likely to be worse in the locality of production.

It is important to note that definitions may differ due to organisational belonging and perspective. When Tordo et. al. (2013) discuss operator adoption of local content as part of CSR, it is largely concerned with enhancing relations within the community in which they operate; whilst, a national government is likely to encourage value added on a national scale. A prominent cause of governments’ interest in maximising value to the economy as a whole is that macroeconomic phenomenon such as the Dutch Disease (The Economist, 1977) impact the economy as a whole and not just areas around the exploration site. Failing to address this may lead to a booming resource enclave and the decline of other industries outside the enclave. Taking the above discussion into account, my study will address local content as a national objective, this is aligned with the Ugandan government’s definition and the use of the term ‘national content’.

3.12.2 How do we Define ‘Content’?

Further discussion must focus on the definition of ‘content’. Definitions of local content vary and across different industries it may be suitable to adopt different interpretations. As noted earlier, previous examinations of local content in the oil and gas industry have not chosen a robust definition which allows for accurate measurement and assessment. Figure 1 provides existing definitions.

Figure 1: Local Content Definitions

IPIECA, 2016, p. 8	“The local resources a project or business utilizes or develops along its value chain while invested in a host country.”
Tordo et al., 2013, p. 1	“The extent to which the output of the extractive industry sector generates further benefits to the economy beyond the direct contribution of its value-added, as through links to other sectors.”
Eni, 2016d, p. 9	“Added value brought to a host nation (or region or locality) through workforce development, employment of local workforce; and training of local workforce; and investments in supplier development ... and procuring supplies and services locally.”
Oil and Gas IQ, 2010	“Local content is the development of skills, oil and gas technology transfer, and use of local manpower and local manufacturing”

The above definitions are insufficient for a robust study into local content because they lack specificity and measurability. For this study and as discussed previously, I believe that the definition can be refined to focus on the core components of local content which will reduce ambiguity and challenges concerning measurability. These core components of local content are simply, ‘employing and procuring’ from the indigenous value chain. However, as this study looks at the commitment of stakeholders to local content, I also consider investments and the provision of technical support for local content development,

broadly referred to as a ‘commitment’ to capacity development initiatives. Correspondingly, the three key criteria utilised to measure operator and other stakeholder commitment to local content are: indigenous employment and procurement, and commitment to local capacity development.

In reinforcing the above, it should be noted that local content development initiatives, such as investing in supplier development, operator staff training, and broad-based local content development interventions, are not the final objectives but the vehicles to deliver greater local capacity, which, in turn should aid greater local content adoption. This refined definition provides a robust framework for measuring the value added to the indigenous economy. By focusing on these measurable, core components of local content, we can assess more accurately operator commitment to localisation as well as the roles and commitment of other stakeholders in contributing to quantifiable and inclusive development agendas. Instead of the aforementioned definitions which have been used in existing publications, the context of this case study undoubtedly played a role in defining the terms ‘local’ and ‘content’. The definitions chosen for this research reflect the stated desire of the Ugandan government, and many Ugandans, to use hydrocarbons resources as a vehicle for national development.

4. Chapter 4: Context: Oil and Gas in Uganda

This chapter provides background to the research, highlighting the development timeline of oil and gas in Uganda, but also providing an overview of Uganda's local content story so far. Beyond historical and geographical context, this chapter focus on exploring the key stakeholders and their roles and remits in the industry. Section 4.3 explores Uganda's political economy, whilst section 4.4 explores the stakeholders involved in Uganda's oil industry. As indicated by its inclusion in this study's research questions, the political economy of Uganda has played a substantial role in determining the pace and direction Uganda's oil industry and its local content story. Section 4.5 provides an overview of Uganda's sector governance, notably around local content, highlighting the slow pace at which regulation and legislation have been developed and implemented. The chapter concludes by exploring indigenous capacity challenges and the labour and procurement demands of the project lifecycle, noting the findings of the Industrial Baseline Survey (2013). In providing the necessary context for this research, this chapter relies heavily on existing literature and media publications in addition to data gathered during the fieldwork process.

This chapter also demonstrates that whilst the Ugandan government have been successful in negotiating favourable revenue sharing agreements with operators, the growth of the industry, hand-in-hand with the development and utilisation of local content, has been less successful. The most visual manifestation of this notion is the sedate progression of the industry towards the development phase, but also, as this study explores, the tardy and poorly managed development of local content. Whilst the executive body performed effectively in oil negotiations, developing an industry that works for the country requires a great deal of institutional capacity, a factor which this study believes has been inadequate.

In the following sections I also introduce stakeholders related to the Ugandan state. While these stakeholders are discussed further in Chapter 7, they are also contextual factors when presenting findings concerning the attitudes, actions, and interactions of other international stakeholders. These international stakeholders, including the operators, oil field service companies and donor / development organisations are introduced primarily within chapters

five and six, along with this study's research findings. As set out earlier in this work, this study sought to deliver an in-depth analysis of the oil companies, their engagement with local content and their motives.

4.1 The History of Oil and Gas in Uganda

The presence of oil and gas in Uganda was documented as early as 1925 (Wayland, 1925) noting seepages and the potential across Uganda's five sedimentary basins. The first deep well was drilled in 1938 by the African – European Investment Company, during which hydrocarbons were encountered. Britain's involvement in the Second World War slowed further exploration; although a number of geological surveys were carried out in the 1940s and 1950s. Independence was granted on the 9th of October 1962, however, this event did not serve as a catalyst for greater exploration. Little progress was made in the post-colonial era; Uganda's first president, Milton Obote (prime minister (1962–70) and twice as president (1966–71, 1980–85)), saw his first premiership compromised by ethnic tensions, in turn creating political challenges, a lack of territorial consolidation and the existence of armed opposition to the government (De Kock & Sturman, 2012).

Obote's unsteady first premiership fell to Amin's military coup in 1971, leading to a decade frequently characterised by shocking state brutality. Eventually, Amin was overthrown (1979) only for Obote to return until his government was toppled again (1985); amidst vying military and political groups, Yoweri Museveni, a bush fighter general with genuine political aspiration, and his National Resistance Movement came out on top. Museveni's strong leadership and 'big tent' politics restored relative stability to Uganda and the aforementioned challenges to Obote's premierships were largely overcome. However, by the latter stages of the 20th century, big oil companies had become less interested in East Africa, due to limited commercially viable finds, and consequently Museveni had to 'beg' western oil companies to restart exploration projects (Mwenda, 2020). Increasing exploration under Museveni eventually led to the declaration of commercially viable oil and gas reserves in the Albertine Graben in 2006. An in-depth historical overview is provided in Figure 2, taken from a Petroleum Authority Uganda publication.

A number of exploration companies had been operating in Uganda towards the latter part of the 20th century, with Hardman Oil and Gas and Heritage Resources being the most prominent in the early 2000s (Clarke, 2010). Following acquisitions by Tullow Oil and subsequent farmdowns, three multinationals were licenced to develop the sector: Total E&P, Tullow Oil and the China National Overseas Oil Company (CNOOC), these companies constitute a Joint Venture Partnership (JVP) and are referred to as the 'operating partners'. More recently, Tullow's involvement in Uganda appears to be coming to an end as the company has been attempting to further farmdown its remaining one third interest to Total E&P and CNOOC since 1st of January 2017. The aborted sale in 2019 would have left Tullow with an 11.76% interest in the upstream and pipeline, which would reduce to 10% when the Government of Uganda formally exercises its right to back-in. Other companies involved in exploration and production including Armour Energy of Australia and Oranto Oil and Gas of Nigeria, both companies are continuing to explore blocks in the Albertine Graben, neither company has a production licence, and both have a considerably smaller presence in Uganda than the operating partners.

Uganda's oil and gas industry has been beset by delays, with earlier documents noting that first oil may arrive before 2013 (Clarke, 2010). These delays have been further exposed by the pace at which Ghana and Kenya have moved from the discovery of commercially viable oil to production. The government's non-approval or non-responsiveness to field-development plans, which were first proposed by Tullow Oil in 2013, has prevented the industry from progressing to the development phase. In recent years a tax dispute between Tullow and the government over its proposed asset sale has contributed to the delay, with Museveni refusing to provide any tax concessions to the operators which may aid a farmdown or sale and thus allow the industry to progress toward production.

It was noted throughout the research that the approval of the field development project was not expected immediately following its presentation, noting various rounds of comments and amendments which may in turn take a number of years. However, the supposed non-responsiveness of the government to the development plans, coupled with the timeframe has engendered a degree of scepticism about the future of the industry. Rwengabo (2017) con-

tends that the Ugandan government has been keen to ensure the requisite institutional infrastructure, local capacity, and policy, legal, and regulatory framework for managing the sector are in place before moving forward with the development phase, noting the current challenges being faced in Ghana as a result of their absence.

Uganda's circumstances are further complicated by the landlocked nature of the country. The nation and its operators have had to consider numerous routes to export the oil, with the agreements being made for the EACOP (East African Crude Oil Pipeline), which will run from Kabaale in Uganda to the Chongoleani peninsular in Tanzania when complete (although development is unlikely to start until 2021). Further challenges have been faced in the search for partners to construct and run Uganda's proposed refinery in Hoima, as both Russian and Korean consortiums pulled out of the proposed projects after they were chosen as the winning and reserve bidders by the Ugandan government. Such factors also contribute in explaining the continued delay of the development project, a factor that has hindered, at least in the short term, the adoption of local content in Uganda's oil and gas industry. Respondents, as we will see in later chapters, were more critical of the government's role in the delayed development project and the timely implementation of a strategy to mandate and encourage local content adoption and development.

Figure 2. Timeline of Oil and Gas in Uganda (Source, PAU, 2020)

The Early Efforts (Pre-1980)

In 1925, Petroleum Potential of Uganda was documented by a Government Geologist E.J. Wayland, in the publication "Petroleum in Uganda". The report documented existence of oil seepages along the shores of Lake Albert in on both Uganda and DRC sides.

In 1936 -1956, the first shallow stratigraphic wells were drilled by the African – European Investment Company. The first deep well, Waki B-1 well was drilled in Butiaba, in 1938 and encountered bitumen. Twenty (20) Shallow wells were drilled in Kibiro and Kibuku areas for geological correlation and these are documented by Harris et al 1956. Geological surveys and Mines Department, during the 1940's and 50's established the presence of sedimentary sequences in the Albertine Graben (Memoirs of the Geological Survey, 1959).

<p>The period 1945 – 1980 is referred to as the period of Limited Activity because of the Second World -War, change in policies of colonial masters where East Africa was zoned for Agriculture coupled with post-independence political uncertainties and instability in the Country.</p> <p>Consistent and modern efforts commenced in 1983 with the acquisition of 9,578-line km of aeromagnetic data that identified three depo centres along the entire length of the Graben and have been going on.</p> <p>Other achievements that have been made in this era are highlighted in the table below.</p>
<p>1985</p> <p>Petroleum (Exploration and Production) Act is enacted</p> <p>World Bank Credit to support to Petroleum Exploration Promotion</p>
<p>1986</p> <p>Commencement of specialised training in petroleum aspects</p>
<p>1990</p> <p>Cooperation Agreement between Uganda and DRC for Joint Exploration and Development of Common fields signed</p>
<p>1991</p> <p>A PSA between Fina Exploration Uganda b.v and Government signed. Fina takes the entire Albertine Graben</p> <p>Formation of Petroleum Exploration and Production Department; PEPD carried out ground geological and geophysical surveys in areas identified by the aeromagnetic data. Data acquired was used to Promote the Albertine Graben for investment</p>
<p>1993</p> <p>Petroleum (Exploration and Production) (Conduct of Exploration Operations) Regulations, 1993 came into force.</p>
<p>1997</p> <p>Licensing of Exploration Area 3 (Semliki Basin), to Heritage Oil and Gas Limited (HERITAGE)</p>
<p>1998</p> <p>HERITAGE acquires the first 2-D seismic data (170-line km) in Uganda.</p>
<p>2001</p>

Hardman Resources and Energy Africa is licensed Exploration Area 2 (Northern Lake Albert Basin)
2002 – 2004 Drilling of Turaco wells by HERITAGE and ENERGY AFRICA, the first deep wells in the basin to encounter oil and gas. HERITAGE is licensed to Exploration Area 1(Pakwach basin).
2005 Exploration Area 5 (The Rhino Camp Basin) is licensed to Neptune Petroleum (Tower Resources). Drilling of Mputa-1 well by Hardman and Energy Africa in Kaiso-Tonya area.
2006 Hardman Petroleum Pty (now Tullow) makes the first commercial discovery well in Kayiso Tonya area. Hardman Petroleum Pty (now Tullow) signs an MOU with Government for an Early Production Scheme (EPS) for oil production, Seniorping plant; and Thermal Power generation ~ 50-85MW.
2007 Dominion Petroleum is licensed to Exploration Area 4B.
2008 Cabinet approves the National Oil and Gas Policy;
2010 – 2012 Farm-out of Heritage oil and Gas to Tullow and Farm-in of Total E & P Uganda and CNOOC Uganda Limited Production License over Kingfisher issued
2013 Petroleum (Exploration, Development and Production) Act 2013 enacted In addition to Kingfisher, Total and Tullow submit applications for possible award of Production Licenses over sixteen (16) discoveries
2014

A Memorandum of Understanding on Commercialisation was signed between Government and Licensed oil companies which under pinned the three principles options of crude for export, refinery and crude for power.

2015

Appointment of the Board of Directors for the Petroleum Authority of Uganda

Uganda had the first competitive licensing round for 6 blocks in the Albertine Graben, that culminated into the licencing of Armour Energy Limited (Australia) and Oranto Petroleum Limited (Nigeria)

2016

Six (6) Production Licenses issued to Tullow Uganda Operations Pty and three (3) Production licences issued to Total E & P Uganda

Appointment of Executive Director for the Petroleum Authority of Uganda

Seven sets of Upstream and Midstream Petroleum Regulation issued

The Hoima to Tanga Crude oil pipeline routing agreed

2017

Appointment of Directors for the Petroleum Authority of Uganda

FEED for Upstream Facilities and also for EACOP were launched

IGA for EACOP was signed between Uganda and Tanzania and foundation stone laid

New exploration Licenses issued to Armour Energy Limited (Australia) and Oranto Petroleum Limited (Nigeria).

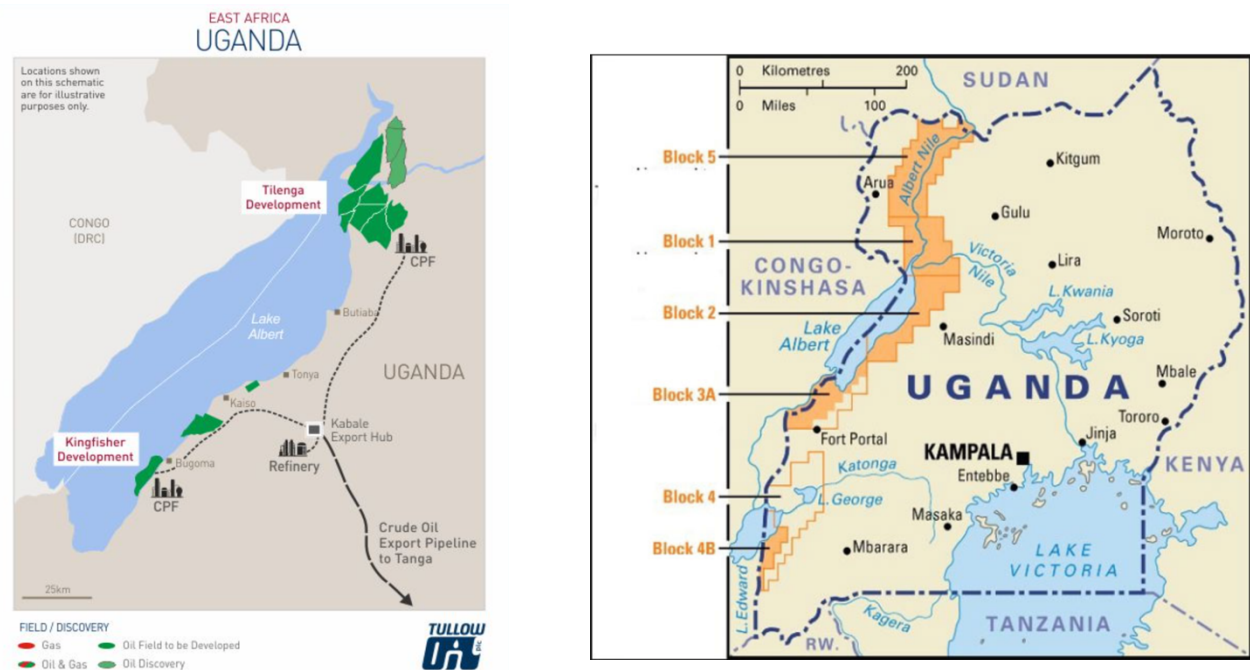
4.2 The Geography of Uganda's Oil Wealth

The discovery of commercially quantities of oil has seen the growth of the industry and its promised wealth become somewhat of a national obsession, with many seeing it as the vehicle to deliver real development in this underdeveloped nation. The nation's oil reserves are ranked fourth by size in Sub-Saharan Africa, behind Nigeria, Angola and South Sudan. The majority of the discovered reserves sit in the Hoima District and the neighbouring Buliisa District (as shown in Figure 3), primarily on the shores of Lake Albert. Hoima town is poised to become the economic hub for the oil industry in Uganda and potentially a hub for the wider East-Africa region in light of a number of discoveries in the last two decades. If we

consider the political and economic circumstances coupled with the state of conflict in Nigeria, South Sudan and Angola, it is not inconceivable that Hoima's relative security could engender the development of an oil service hub supporting operations across East Africa or sub-Saharan Africa; however this notion has been greatly undermined by the lack of progress towards production.

Hoima is already colloquially referred to as 'Oil City' after the discoveries under and on the shores of Lake Albert in 2006. Among other factors, the prospect of new jobs and prosperity have caused its population to grow dramatically from 27,930 in 2002, to 100,099 in 2014, a factor that has delivered a number of challenges to the local economy and state resources. Hoima will not only be the focal point for exploration and production, but also refining, petrochemicals and Uganda's distribution network as Uganda's only refinery is planned to be constructed in the district (Albertine Graben Refinery). The refinery will be served by an enterprise district and new airport which is expected to be completed in 2021. The airport will support the development phase of upstream, midstream and downstream (refining capabilities) oil and gas. The second phase of construction, focused on the facilitation of passengers and boosting tourism and business, was expected to conclude in 2022, although reports vary. Prior to the opening of the airport and the development of other necessary infrastructure in Hoima, it seems appropriate that the oil industry remains based out of Kampala, where international access is facilitated by the airport in Entebbe and in proximity to the sector's governing and regulatory bodies in and around the capital.

Figure 3. Map of Resource in Hoima and Buliisa Provinces (Source: Tullow Oil)



The location and consistency of Uganda's crude oil provides some additional challenges. Currently, Uganda imports most of its petroleum products from Kenya and in 2015 consumed around 20,000 BPD (U.S. Energy Information Administration, United States Department of Energy, 2020), although some estimates suggest a figure closer to 35,000. At peak production, Uganda's current discoveries have the capacity to deliver around 230,000 BPD (Energy Voice), although Hickey et. al. (2015) notes a more realistic figure of 100,000 BPD; this remains substantially more than the output of the proposed refinery in Kabaale / Hoima of 30,000 BPD (Andrews & Grant, 2020) and indigenous demand for petroleum products. Correspondingly, the requirement for a pipeline (EACOP), coupled with the waxy nature of Uganda's crude, suggests a high cost of getting the crude product to the international market.

The proposed pipeline to the Tanzanian Port of Tanga will be 1445 kilometres long and is required to be heated as Uganda's waxy crude solidifies at ambient temperature. The USD 3.5 billion cost is a substantial investment which will see Uganda's crude transported to the Indian Ocean along the world's longest heated pipeline. According to 'The East African'

(2017), Uganda will pay Tanzania USD 12.20 for every barrel flowing through the pipeline and upon arrival to the global oil market may command a spot price lower than many crudes owing to a lower API gravity range (The PAU claims Ugandan Crude has a broad API range of 17-31 degrees, with a low sulphur content). The waxy nature of this crude does not necessarily mean that it is heavy (which is potentially less desirable than lighter crudes), however, the API range provided by the PAU is significantly below that of crude oil benchmarks WTI (39.6) and Brent (38.06) which will impact the price the crude commands. Whilst the relevant stakeholders still appear confident about the profitability of the oil production in Uganda, it is important to note that these fields were explored during a period of accelerated exploration activity in 2004-2008, at which time oil prices peaked at USD 147 per barrel (Anderson & Browne, 2011). Correspondingly, the profitability of Uganda's oil may be easily compromised by spot price changes and greater project costs.

4.3 Uganda's Political Economy

As Chapter 2 argued the political economy lens is an approach all too seldom used in studies of development economics and is "particularly fruitful from a macroeconomic perspective, identifying underlying political reasoning and barriers for economic development" (Kappel & Never, 2017, p. 2). Analysis of Uganda's political economy (Kelsall, 2013; Hickey et al., 2015; Kappel & Never, 2017) provides a useful insight into how Ugandan state actors influence and effect other stakeholders, including operators, indigenous enterprises, donor organisations and vice-versa. Political settlement theory has been utilised by a number of authors, including Hickey & Izama (2017), in the context of Uganda, its oil endowment and revenue sharing negotiations. This lens focuses on the role of elites, primarily Museveni, who's leadership and long-lived premiership is an integral factor in understanding oil and oil policy developments in Uganda. Whilst Museveni dominates discourse on Uganda's political economy, political settlement theory is not entirely compatible with this work's focus on 'implementation' and the governance of local content adoption and development. Correspondingly, this study utilises the institutional lens, focusing on Uganda's administrative capacity and its effectiveness in governing the oil industry's development.

Uganda's history has shaped its present-day politics; given the conflict and upheaval that preceded Museveni's presidency, the 'big man' nature of his leadership was arguably unavoidable. Uganda's political settlement is personalised in nature (Tangri & Mwenda, 2019; Wilkins & Vokes, 2018), with the elevated role of the executive body manifest in practice and in law. Increasingly academics note that power is being centralised, delivering greater discretionary power to the President and his technocrats, reinforced by the appointment of politically loyal ministers, such as Katureebe (Chief Justice) and Kasaija (Finance Minister) in 2015 (Bukenya & Hickey, 2019).

After 35 years as president, Museveni, the once liberator and champion of 'big tent' politics, presides over a government and civil service which is increasingly unrepresentative of the Ugandan nation, with people from the western regions and the Banyakole (Museveni's ethnic group) overly represented in positions of power and influence; as Hickey et al. (2015) note, Uganda has moved from a broad-based developmental coalition to a weak dominant party settlement. Museveni's hold on power was further reinforced by a controversial election victory in January 2021, which saw popular opposition leader Robert Kyagulanyi (also known as Bobi Wine) arrested on multiple occasions while campaigning (for exceeding gathering limits during the Covid-19 pandemic) and put under house arrest post-election; election week also saw the authorities switch off social media and eventually the internet.

The personalisation of power under Museveni is furthered by co-optation and the promotion of those within his family to positions of political influence, including Uganda's military (Botha, 2012). Among many other examples, including Museveni's wife, Reuss and Titeca (2017) highlight the role of the President's half-brother as a UPDF (Uganda People's Defence Force) General and the promotion of Museveni's son, Muhoozi Kainerugaba, to Half-Colonel in 2008, in charge of Special Forces and responsible for providing security at Uganda's oil installations. In the 12 subsequent years, Kainerugaba has risen a further four ranks, being promoted to Lieutenant General in February 2019 at the age of 44 (Daily Monitor, 2019); particularly young for such a rank.

The centralisation of decision making is reinforced by the centralised nature of public finances. Uganda's political elites operate in a position of low domestic taxation and government revenue, but considerable income from international aid. The centralised nature of decision making has been reinforced by the abolition of the local government tax in 2006 (Kjær et. al. 2015), consolidating the primacy of central governance. However, as the National Resistance Movement party (NRM) and Museveni's popular support has waned, the government has also become more repressive and on occasion relies on the direct or indirect display of its capacity for coercion (Golooba-Mutebi and Sjögren 2017).

Kappel and Never (2017) describe a political economy characterised by favouritism and non-competitive clientelism, where political power is also a vehicle to gain economic power and influence. The authors claim that this rent-seeking activity is particularly prevalent in Uganda's oil industry and other large infrastructure projects. A degree of concern is reflected by a number of authors, Kelsall (2013) talks of a strategy of 'developmental patrimonialism' rather than predatory forms patrimonialism, noting the imposed centralisation of rents by ruling elites with a view to enhancing their incomes in the long run, which, according to Hickey et. al. (2015), reflects the state of the political economy within Uganda's oil and gas industry. As will be discussed at greater length in Chapter 7, the aforementioned non-competitive clientelism is reducing the opportunity for inclusivity and broad participation in Uganda's oil and gas industry. In reflecting the prominence of Museveni, his family member and associates in political and business matters related to oil and gas, some members of Uganda's political opposition have taken to referring to the sector as 'Museveni's family business'.

Despite efforts to separate the institutions responsible for the oil from politics, it is clear that Museveni's influence over the sector's development has been considerable. Museveni's government was praised for the adoption of the Norwegian administrative model, however, it does appear that other state initiatives have undermined the model's potential effectiveness; Mbabazi notes that "the legislative bills governing the oil industry grant "authoritarian-like" powers to the Minister responsible for oil, known as Clause 9" (Mbabazi, 2013, p. 22), greatly contradicting the purpose of separating remits between state institutions.

Hickey et. al. (2015), focusing on the nature of contracts and agreements drawn up between the government and oil companies, contend that the executive body has represented the country well. Following two notable public sector scandals involving bribery which took place in 2013, President Museveni sought to cut out the middlemen, and according to Hickey et. al. (2015), played a leading role in negotiating with the operating partners. Despite previous examples of the abuses of discretionary power in other nations, it appears that the national interest was well catered to in these discussions and as a result Uganda's agreed share of the oil revenue is one of the highest in Africa; Mwenda (2020) notes that Uganda's share of oil revenues is 78%, more than most mature oil producing economies and substantially more than nascent oil economies.

Conversely, the growing tendency of Museveni to micromanage the industry represents a concerning political risk for operating companies (Patey, 2015). The author contends that "a quasi-authoritarian leader in a dysfunctional democracy could very well lead to further delays in the industry's development; these delays have since materialised. Resultantly, an unpredictability remains for the oil industry in this hybrid governing system" (Patey, 2015, p. 5) which is furthered by Museveni's 'hardliner' governance of the sector, refusing to give tax concessions to the operators and ensuring the industry progresses on Ugandan terms. On one hand, whilst the President wants to ensure the best deal for the country and guarantee that Uganda is not being "cheated" by the operators, observers, including Mwenda (2020), believe that Museveni's judgement and overall sectoral governance has been, and will prove to be, ineffective in actualising Uganda's resource wealth.

A further examination of the impact of Museveni on local content and its development will follow in Chapter 7, however, the above literature is important in contextualising the findings in all of the following chapters. One of the most important contextual factors is that, despite prophetic examples from across the world, Museveni possesses discretionary power in oil and gas governance which may engender unpredictable outcomes, notably the further delay of the industry. The primacy of Museveni, his family and his ethnic group in positions of power within oil and gas also raises a number of questions, including the intended inclusivity of the industry and its impact on local content adoption and development.

However, this study primarily focuses on the role and effectiveness of the bureaucracy and its interaction with other stakeholders, hence the choosing of an institutional theoretical framework over a political settlement framework. The responsibility of implementing Uganda's oil policy and achieving its local content aspiration falls to its bureaucrats, that is to say those responsible for the day-to-day operations of the state. Correspondingly, an understanding of Uganda's institutional makeup is the primary factor in contextualising this study's findings.

Uganda inherited a number of bureaucratic traditions from the British, including a supposedly neutral bureaucracy, administrative processes and legal restraints to prevent unconstitutional activity, in turn, this inheritance provided a degree of institutional strength following independence. As noted by Lofchie (1972) and Miller (1975), Obote's first premiership sought to ensure that civil servants were appointed on merit, at least this was the stated goal of the president, reinforcing the notion of a bureaucracy separated from politics. However, Amin's successful coup brought an end to this notion of a non-politicised bureaucracy, as he and his regime favoured Muslims and northerners (Rollo, 1974) despite the Christians and Buganda (a Bantu kingdom and broad ethnic group from the west of Uganda; a group to which Museveni belongs) largely being the beneficiaries of western educations. It is seemingly the case that bureaucracy has never truly been separated from politics since, as a major feature of this research is the predominance of people from the west of Uganda in the civil service, among other respected professions.

Uganda's adoption of the Norwegian model is an important feature of the administration's resource governance; however, it did not impact all institutions related to the development of a localised oil and gas industry. There are a number of government institutions, removed from the Norwegian model, that are tasked to deliver a localised oil industry in Uganda, such as the Ministry of Education and Sport. The objective of developing a localised industry has stretched the capacity of many ministries, testing not only their institutional capacity but also inter-agency cooperation, particularly as the remit of developing Ugandan content falls within the mandates of multiple government ministries, institutions and agencies. Correspondingly, many of Uganda's challenges have been related to the implementation of its

policies and achieving objectives, a notion that will be covered in greater detail in later chapters. The institutions responsible for the development of the oil and gas industry, along with local content, are highlighted in section 4.4 below.

4.4 Stakeholders in Uganda's Local Content Story

According to the National Oil and Gas Policy for Uganda (2008), local content is a strategic goal of the Ugandan state and has been since the industry's inception in Uganda. This study recognises that there are a great number of stakeholders involved in the development of local content and its adoption in Uganda, many of whom are international organisations and agencies. Figure 4, taken from the OGP (National Oil and Gas Policy for Uganda), highlights the roles and remits of organisations in 2008 (before the responsibilities of oil governance - not including complimentary ministries such as Ministry of Education and Sport - were separated into three bodies by the introduction of the Norwegian Model); whilst noting a plethora of responsible organisations, the operating companies are the only non-Ugandan entity.

Figure 4. Entities Responsible for Ugandan Local Content (2008)

Entity / Player	Key Roles and Responsibilities
Petroleum Exploration And Production Department (PEPD)	PEPD should: <ul style="list-style-type: none"> - Carry out petroleum exploration promotion - Initiate petroleum legislation, Model PSA - Monitor oil companies' compliance with existing laws, regulations and agreements. This includes compliance with national content requirements.
Advisory Committee—under the PSA (consists of venture partners & govt representatives)	<ul style="list-style-type: none"> - Consists of four members- two (2) appointed by government, and two (2) representing the oil company. The role of secretary of the committee is held by the Oil Company. - The committee is responsible for reviewing and approving the oil companies' annual work programmes and budgets, which include: planned activities relating to procurements, training and employment.
Ministry of Education National Curriculum Development Centre	<p>The MoES is responsible for:</p> <ul style="list-style-type: none"> - Promoting the development of education and training programmes in order to

National Council for Higher Education	<p>create requisite national human resource expertise for the oil and gas sector</p> <p>on a sustainable basis;</p> <ul style="list-style-type: none"> - Reviewing, expanding and approving the education curricula in the country <p>with a view of producing the workforce required for oil and gas activities nationally.</p> <ul style="list-style-type: none"> - Promoting relevant research and studies in collaboration with the Ministry responsible for oil and gas, and any other relevant institutions.
District Local Governments	<ul style="list-style-type: none"> - Mobilize and dialogue with communities. - Contribute to holding the different players accountable with regard to oil and gas issues; - Participate in getting the voices of the poor into designing, monitoring and implementation of programmes in the oil and gas sector.
Ministry of Trade, Industry and Cooperatives (MoTIC)	<ul style="list-style-type: none"> - To formulate and support strategies, plans and programs that promote and ensure the expansion and diversification of trade, sustainable industrialization and preservation of other tradable national products, to generate wealth for poverty eradication and benefit the country socially and economically.
Universities and other educational institutions	<ul style="list-style-type: none"> - These are required to come up with and offer relevant university programmes/ courses to equip Ugandans with relevant skills to participate in the oil and gas sector.
Ministry of Agriculture and Animal Industry	<ul style="list-style-type: none"> - Build capacity/train Ugandan farmers to ensure that they meet international standards on the quality of food products required for supply to International Oil Companies (IOCs)
Ministry of Internal Affairs/ Immigration Office	<ul style="list-style-type: none"> - Clear expatriates to enter the country and issue work permits/special passes
Public Procurement and Disposal Authority (PPDA)	<ul style="list-style-type: none"> - Carry out procurement audits to ensure that International Oil Companies (IOCs) comply with the procurement requirements agreed upon in the contracts/ stipulated in the law.
Association of Ugandan Oil and Gas Service Providers (AUGOS)	<ul style="list-style-type: none"> - This brings together interested Ugandan service providers and suppliers of goods to sensitize them on requirements and help lobby for inclusion in the industry.

Oil companies	- These are required to comply with existing laws, regulations and agreements on national content requirements.
Source: NOGP (2008), PSAs and Interviews with respective stakeholders	

The current scenario, which also sees responsibilities of oil governance split in accordance with the Norwegian Model, presents a more complex picture, with multiple external stakeholders and a greater division of responsibility within the Ugandan government. The creation of additional institutions, replacing the PEPD (The Petroleum Exploration and Production Department), reflects the adoption of the Norwegian model, separating the commercial interests of Uganda, from regulatory and political objectives, a move which Museveni's government is often lauded for, despite the lack of progress towards actualising a producing oil industry (Hickey & Izama, 2020). The PEPD was superseded by the MEMD (Ministry of Mines and Mineral Development, within which sits the Petroleum Directorate); the new administrative model also saw the creation of the PAU (Petroleum Authority Uganda) and UNOC (Uganda National Oil Company), all of whom play a role in local content, including employing local people themselves.

Hickey & Izama (2019) note that falling staff numbers of the PD (Petroleum Directorate)² and the growing size of the PAU and UNOC, representing the implementation of the new legal framework and the inevitable shift in focus from regulation to commercial interests. However, Hickey and Izama (2019) suggest that the PD is downsizing too soon, as the department struggles to deliver on its mandates, including the regulation of downstream interests and, more broadly, to oversee further exploration project across Uganda's five sedimentary basins. In 2019, the PD employed less than 17 operational staff.

In addition to the above, this research also notes responsibilities and mandate of the Ministry of Gender, Labour and Social Development, particularly in matters related to upskilling Ugandans. Respondents frequently noted the shared objective but often mixed mandates

² MEMD Annual Report, June 2019: 33 Employees within PD, more than half of which are non-operational staff including six cleaners, six attendants and three security personnel.

of the various institutions in developing local capacity, notably between the Ministry of Education and Sport and the Ministry of Gender, Labour and Social Development, but also the Ministry of Trade, Industry and Cooperatives. Whilst the new ministries created by the adoption of the Norwegian model have benefited from substantial donor support, not only financially, other ministries have been less fortunate; notably the Ministry of Education and Sport whose achievements have been questionable, particularly prior to the recent provision (by a donor organisation) of technical expertise.

As the industry developed, we can see the addition of new international stakeholders, all of whom have an interest in local capacity. Beyond those noted in Figure 4, whose roles and responsibilities are mandated, the local content landscape in Uganda is incomplete without recognising the role of donor organisations, international oilfield service providers and EPC contractors. The presence of multilateral organisations and donors predates the discovery of commercially viable oil reserves in Uganda, a notable development being Uganda's participation in the IMF (International Monetary Fund) Economic Recovery Programme in 1987 following Museveni's commitments to substantially economic changes. Nowadays, whilst Uganda's education system, as a whole, is greatly reliant on donor aid, the role of donor agencies in upgrading institutions and skilling Ugandans for the oil and gas industry is equally pronounced. And whilst oilfield service companies and EPC contractors have not been involved greatly to date, as the largest employers of local content during the forthcoming development and production phase, these organisations are vitally important in guiding the direction of local content development and its future adoption.

4.5 The Governance of Local Content in Uganda

Despite the adoption of the aforementioned Norwegian model, a feature that is likely to improve administrative performance, it is widely believed that the Ugandan state has moved slowly to implement a strategy to actualise local content objectives. Most prominently, respondents contended that the Ugandan government has been slow to put legislation and regulations in place to govern local content and its development. Whilst Production Sharing Agreements mandated some form of compliance with local content and its objectives, it was

not until 2016 that the government introduced the National Content Regulations; this was consolidated in 2020 by the National Local Content Bill.

Whilst the Norwegian model has created new bodies with new remits for the governance of oil and gas resources in Uganda, the implementation of the model represents a tool which, in theory, reduces opportunities for extra-legal activities, including the involvement of the executive body, placing power in the hands of the bureaucracy and not the President. This is particularly important in light of prophetic examples, notably on the African continent, where presidents and prime ministers have utilised national resources for private or political gain, such as Mobutu Sese Seko in the DRC or Sani Abacha in Nigeria. In Uganda, the Norwegian model provides UNOC with the remit of pursuing Uganda's commercial objectives, the PAU with regulatory authority and the MEMD with a planning / policy remit, theoretically placing these functions beyond the influence of East Africa's longest serving leader.

Whilst positive in theory, the model is complex in its structure (compared with a singular institution which holds all remits) and places substantial pressure on the bureaucracy. The model requires a significant level of institutional capacity; it requires civil servants across three government bodies to be competent and that these three bodies are well-managed and coordinated. The model also demands non-technical capabilities such those that engender successful communication between these three separate bodies. In the past, Museveni has also demonstrated ability to penetrate seemingly independent institutions; in 2011 he coerced the governor of the Bank of Uganda to release USD 741 million for the purchase of Russian fighter planes without parliament's approval, even promising future oil revenue as collateral (De Kock and Sturman 2012).

It is interesting to note that Production Sharing Agreements from 2012 largely share the same, ambiguous three paragraphs on local procurement as those from 2001, with no reference to supplementary documents which may provide greater stipulation, demonstrating little intention to utilise the PSA to mandate greater local content. This is compounded by a phrase recurrent in multiple Production Sharing Agreements "Licensee shall be free to em-

ploy foreign nationals to the extent that suitably qualified and experienced Ugandan nationals cannot be found to fill a position” (Production Sharing Agreements, Uganda, 2001, 2004, 2012). The absence of any real legalisation until 2013 reinforces the lack of willingness or incapacity to mandate local content during the exploration phase; this may have been a strategy to encourage greater exploration or potentially a missed opportunity. It may well be the case that more recent PSAs have greater consideration for local content, although these have not been made available to this study.

According to the PAU, the Petroleum (Exploration, Development and Production) Act and the Petroleum (Refining, Conversion, Transmission and Midstream Storage) Act 2013, mandates that oil and gas operators must conduct training, employ and transfer technology to the country. It also imposes that operators must demonstrate preference for Ugandan manufactured goods and services. However, interview participants and commentators alike note that this legalisation was never meant to make complete local content provisions. The 2016 National Content Regulations complemented the 2013 Act but made more complete provisions. Uganda’s local content framework, enshrined in legalisation, regulation and PSAs was considered by many respondents in this study to be comprehensive, with the expected inclusion of provisions for employment, training of staff, training of government staff, procurement, technology transfer and reporting. However, the comprehensive nature of the provisions is undermined by ongoing challenges in implementation and monitoring, remits of the MEMD and PAU respectively (Ssekika, 2020). With the introduction of the National Local Content Bill in 2020, it appears that all the aforementioned measures are designed to work in tandem, each new measure supposedly minimising loopholes.

Figure 5. Legalisation and Regulation of Ugandan Oil and Gas

Petroleum Exploration, Development and Production Act, 2013 (henceforth PEDP Act)
Petroleum Refining, Conversion, Transmission and Midstream Storage Act, 2013 (henceforth PRCTMS Act)
Petroleum Exploration, Development and Production Regulations, 2016
Petroleum Exploration, Development and Production National Content Regulations 2016

Petroleum Refining, Conversion, Transmission and Midstream Storage Regulations 2016
Petroleum Refining, Conversion, Transmission and Midstream Storage National Content Regulations, 2016
National Local Content Bill, 2020

4.6 Indigenous Capacity Challenges

Uganda is a well-positioned case study for this research as the nation possessed almost no human or industrial competences relevant to the hydrocarbon industry when commercial quantities of oil were found, perhaps with the exception of a number of geologists and civil servants who were educated in the 1980s (Polus & Tycholiz (2017). Whilst mandating local content adoption has been integral to the creation of linkages into the wider economy in the past, it is only useful in the presence of indigenous suppliers and local people who have the requisite competencies to service the industry. Achieving the requisite level of indigenous capacity, both human and enterprise-level, is a fundamental challenge in actualising the localisation objectives. Raising indigenous capacity is traditionally considered a responsibility of the state and state institutions, however, respondents in this study questioned government activity to develop local capacity; further analysis of this takes place in Chapter 7.

As in many nascent hydrocarbon nations, local enterprise in Uganda has, predominantly, only participated in the supply of lower value contracts, such as transport, logistics, food supply, clearing and forwarding, crane hire, waste management, lifting, camp management, road construction and security among others. High value contracts for specialised goods and services have mostly been awarded to foreign companies. Beyond the heightened, often technical, requirements of high value contracts, local companies are further disadvantaged as tenders are often configured in very large bid lots which, due to their size, have additional complications. Resultantly, local suppliers struggle, largely due to inadequate financial resources that are required for bid bond guarantees, working capital, purchase of inputs, and performance guarantees. These challenges are further compounded by IOCs'

use of international procurement and tender procedures which are complex and require high levels of organisation and management capacity.

Substantial discourse took place during the exploration phase, highlighted by the Ugandan media, which notes the challenges experienced by operators working with local suppliers and the supposed grievances of locals when their businesses are overlooked for contracts. Ssekika (2013) noted an area of contention relating to Tullow's rejection of a local catering company in 2013. It was reported that Tullow did not renew a contract with an indigenous catering firm which had serviced the industry for a number of years and, instead, favoured a foreign supplier. However, in the absence of regulation and the ring-fencing of certain services, it was contended by many that Tullow was not in breach of any law or PSA clauses. Whilst camp services such as catering are not normally considered a specialised input beyond the capacity of indigenous suppliers, Tullow's choice of foreign supplier reflected the need for more extensive camp management services, reportedly running the camp to the standards of a 4-star hotel. The contracting of '4-star hotel' camp management services is more than an indulgence; in 2012 and 2013 it was highlighted that two French nationals had died from Malaria as a result of inadequate mosquito prevention in camps managed by local companies (Ssekika, 2013). Indigenous capacity challenges were further reinforced when a waste-disposal subcontractor of Tullow elected to dump truckloads of waste at Kisimo village instead of transporting it to its intended destination at the Nakason-gola waste disposal facility.

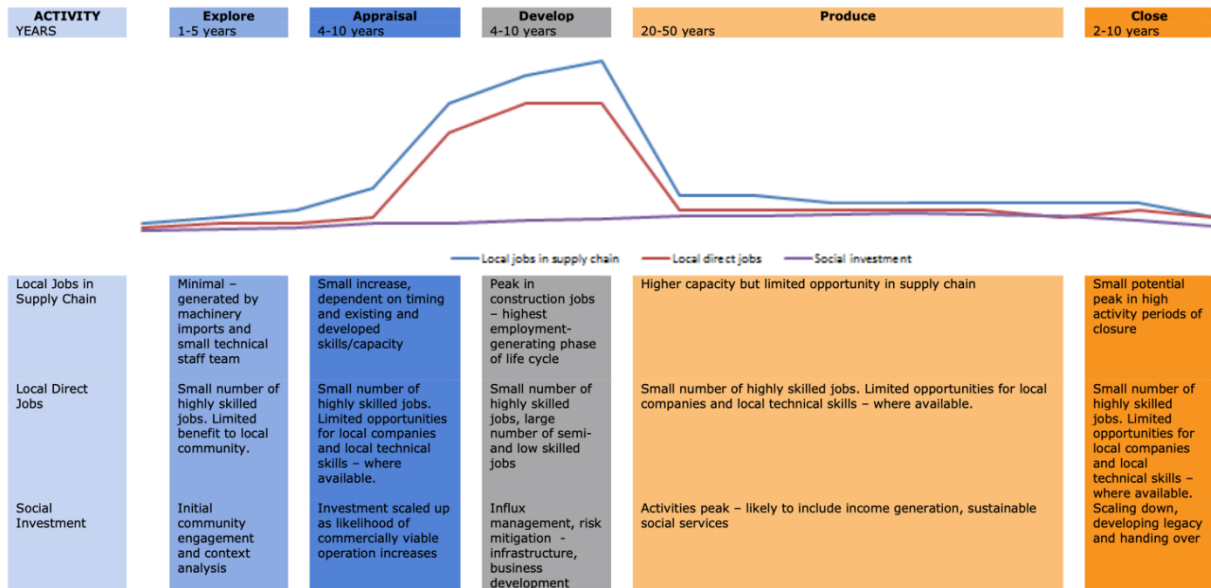
Human capacity challenges and the development of future oil and gas workers has been an equally contentious topic across Uganda. The development of human competencies reflects the nature of the academic and vocational courses available to students and young professional. As such, considerable emphasis is placed on the role of the government, academic and vocational institutions and other stakeholders in guiding and ensuring learning pathways correspond with industry requirements. Throughout Uganda's local content story, international stakeholders, and many Ugandans, have expressed concern about courses being taught and the emphasis placed on academic degrees over vocational courses and the

issues regarding accreditation; these factors feature frequently in the following research chapters.

4.7 Local Content Demand Throughout the Oil and Gas Lifecycle

Inputs, both human and goods and services, into the oil and gas industry are not consistent through the project lifecycle. As we can see from Figure 6, the period of most substantial demand for inputs and particularly inputs that can be provided locally, is during the development phase. Simply put, the development phase is the period when vast construction works will take place, the inputs required are less specialised in nature than other stages of the project and the demand for skilled and semi-skilled labour, such as welders and scaffolders is high. In Uganda, whilst exploration is continuing at some sites, the main project is approaching the development phase subject to the approval of the field development plans and FID (Final Investment Decision). It is important to note that Uganda's development phase is likely to last longer than that of Ghana, owing to the construction of the EACOP pipeline and a proposed refinery, thus prolonging opportunities for both Ugandans and Ugandan enterprise to benefit from the industry's peak activity. The demands of the project lifecycle, in theory, should determine the direction of earlier skills and enterprise development initiatives.

Figure 6. Example Oil and Gas Project Lifecycle and Associated Demand for Local Content (Source: ODI, 2014)



4.7.1 The Industrial Baseline Survey

In 2013, the operating partners commissioned and published the Industrial Baseline Survey (IBS) which highlighted future demand for goods, services and personnel for their development project. It is important to remember that, depending on the success of Oranto and Armour in their exploration phases, there may be future development projects in the Albertine region; although future projects would benefit from the infrastructure created in this first development project. The findings of the document broadly reflect the graphic in Figure 6, highlighting that local people and businesses have the greatest opportunity to benefit during the development phase. The IBS has been very influential in Uganda, the figures have been repeated by officials and stakeholders across the industry, although a number of respondents believe that the IBS may have overstated the industry's future requirements. Despite challenges to the accuracy of the IBS's figures, the report's findings provide useful context for this study's research.

With regards to demand for labour, the report (Hamman, 2013) came to the following conclusions:

- The Lake Albert Basin Development projects will generate thousands of direct jobs in Uganda, with a peak of about 13,000 workers in the construction phase and a plateau at 3,000 people in the operation phase
- Out of total manpower required, 15% are engineers & managers, 60% are technicians and craftsmen and 25% are people without any educational background ('unskilled')
- Education should focus on civil construction, electrical and mechanical fields
- Beyond direct jobs that will be created on site, Oil & Gas activity will also have a potential to generate 100,000 to 150,000 indirect and induced jobs
- Out of total newly created jobs, 80% will be short-term for the peak of construction and will have to be transferred

The following graphs illustrates these findings.

Figure 7. Demand for Labour Throughout Uganda's Project Lifecycle (Source: Industrial Baseline Survey, Hamman, 2013)

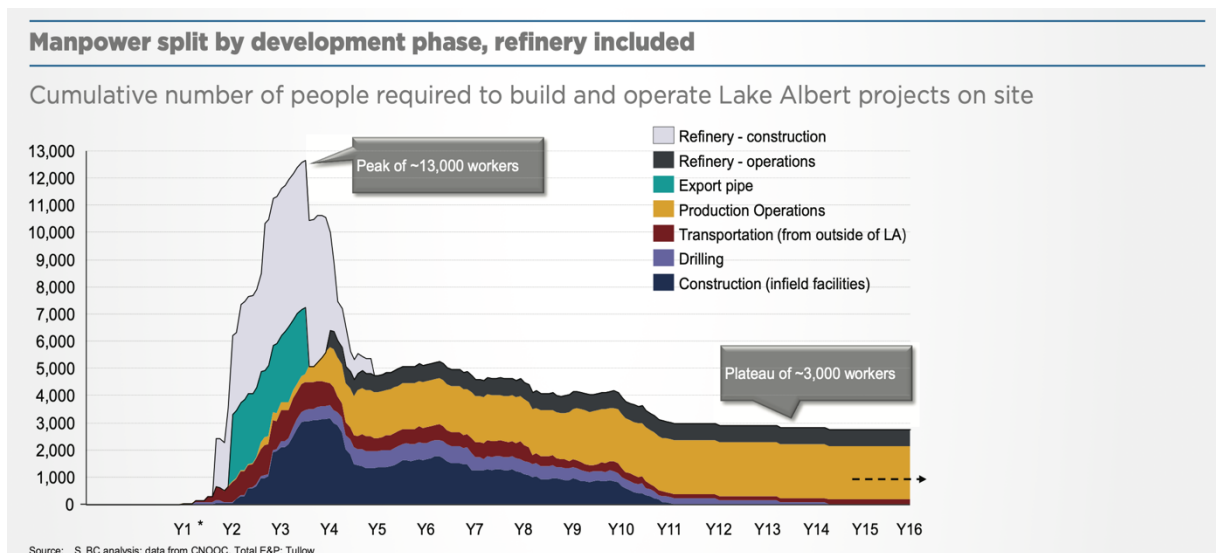


Figure 8. Demand for Labour Throughout Uganda's Project Lifecycle by Labour Category (Source: Industrial Baseline Survey, Hamman, 2013)

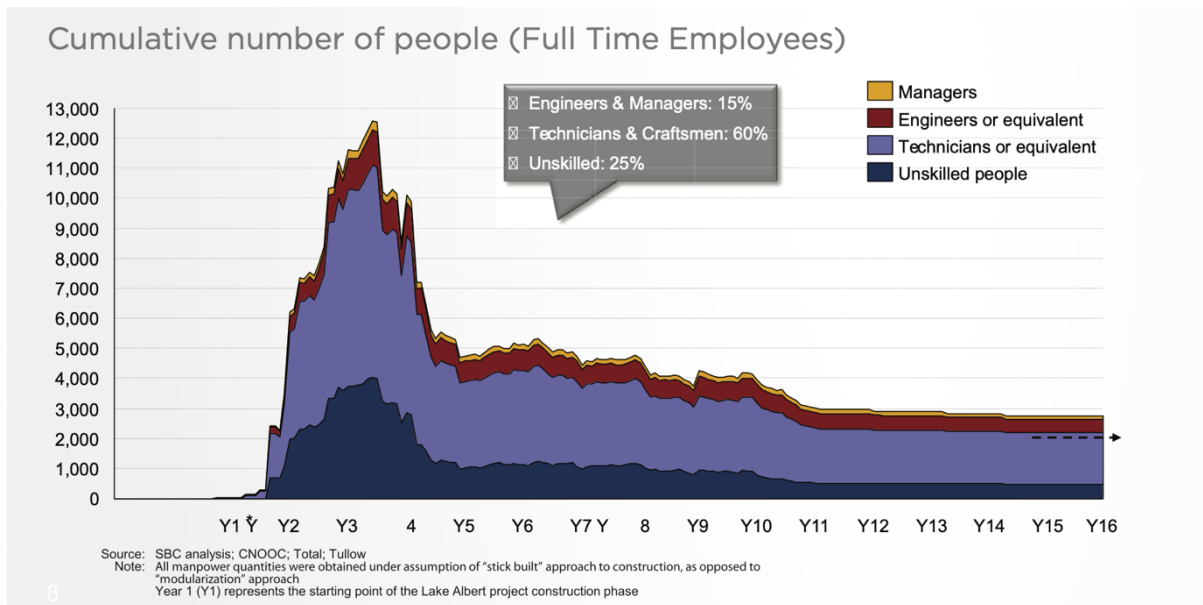
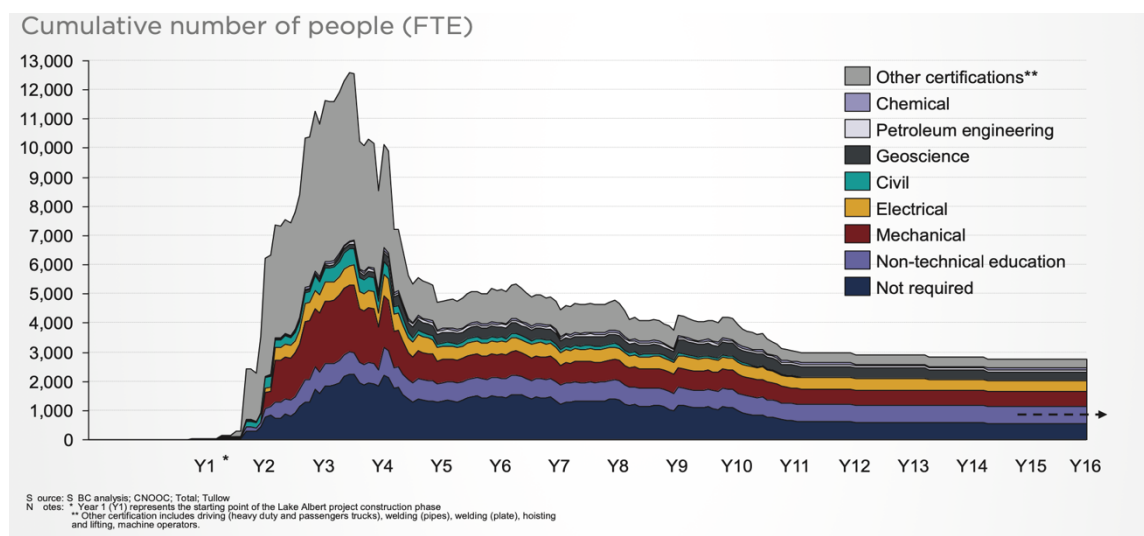


Figure 9. Demand for Labour Throughout Uganda's Project Lifecycle by Qualification (Source: Industrial Baseline Survey, Hamman, 2013)



The report is less precise when discussing the demand for supply, however it is clear that it follows the same pattern noted above. One sector where local companies are more likely to have capacity to service the oil industry is transportation, the following graph illustrates the demand for these services. It is important to note that some suppliers may only

find their services relevant during a small timeframe of the project lifecycle, most likely during the development phase.

Figure 10. Demand for Transportation Services Throughout Uganda's Project Lifecycle (Source: Industrial Baseline Survey, Hamman, 2013)



Figure 10, among other things, highlights the project development phase taking place from 2015, something that clearly has not materialised. Despite the aforementioned potential inaccuracies, the report, as noted in this study's data, has informed a number of targets for local capacity development and qualification requirements. A number of the findings have also informed interventions, such as the creation of an enterprise enhancement centre, a void which has been filled by the Stanbic Bank Business Incubator and the need for a vocational education centre, despite UPIK (Uganda Petroleum Institute Kigumba) already being operational at the time of the report. Most importantly for my study into local content adoption and development in Uganda, the report provides context of Uganda's project lifecycle and a useful timeline of proposed input requirements.

4.8 Conclusion

The context of Uganda's nascent oil and gas industry provides an ideal case study to test my hypothesis. As discussed, Uganda's geography necessitates operators to engage with local content to a level that could be avoidable in a purely offshore operation. With off-

shore finds, like Ghana, a floating production storage and offloading (FPSO) unit can bypass a number of supply chain inputs. However, Uganda's oil industry requires considerable investments into all parts of the industry's lifecycle, including the building of a sizeable, heated pipeline to take the oil to the Indian Ocean and the global marketplace. As such, there are numerous opportunities for operators to employ local people and contract local companies in Uganda. However, the capacity of Ugandan workers and companies to take advantage of the hugely lucrative industry is hindered by a dearth of existing or legacy capabilities and as will be discussed in the next chapter, varying levels of operator commitment to local content.

Research Chapters

Chapter 5: The multi-stakeholder environment, assessing the attitudes and effects of international participants on local content

This chapter investigates the role international stakeholders play in the development of local content and its adoption in Uganda. I argue that local content development and its adoption is not consistent with the business models of all operators in Uganda. It is clear that the business models of CNOOC and Total E&P are in conflict with the timely adoption of local content in line with government expectations. Meanwhile Tullow Oil, the smaller British operator, which has gradually farmed down its stake in Uganda, demonstrated greater commitment to local content development and adoption, suggesting that operating more locally is a key component of Tullow's business model. Uganda's only 'African Operator', Oranto Petroleum, was also perceived to be particularly willing to employ local people and contract Ugandan suppliers, leading respondents to suggest that an African company is naturally more inclined to favour Ugandan capabilities than Western or Chinese firms.

The chapter also argues that the development of local content in Uganda has been hindered by the absence of oilfield service companies and EPC contractors, the largest employers of local people during the development and production phase, as permanent, on-the-ground players in Uganda's industry. Whilst oilfield service companies and EPC contractors have been largely unable to positively impact the development of local content, it is clear that donor and development organisations are increasingly aligning their interventions with the requirement to develop Ugandan skills and capabilities for the oil and gas industry. Donors' interventions have become increasingly relevant and despite the reported ineffectiveness of some historical programmes, have filled a void in expertise and funding without, as some people suggest, subtly representing non-indigenous business and creating opportunities through elite level relationships.

5.1 Introduction

Uganda's context as an underdeveloped nation, with little indigenous capacity in resource industries, necessitated the involvement of copious international partners in order to explore and produce oil. In contrast to Uganda's continental neighbours in West Africa, such as Angola and Nigeria, whose exploration started many decades ago, Uganda's oil industry has attracted a broader array of stakeholders, all of whom, to varying degrees, are concerned with the local content and its development. Beyond the conventional discourse around the role of operating companies³ and the government⁴ in local content and its development, the data obtained highlights a multi-stakeholder environment involving donor organisations, development agencies⁵ and to a lesser extent, future contracting and oil-field service companies⁶. The presence of multiple groups of international stakeholders in Uganda's oil industry is undeniable and their contribution to local content varies from organisation to organisation, although it is possible to observe trends within these stakeholder groups. This chapter explores not only operator commitment to local content and its development, but also investigates the roles of the aforementioned international stakeholders. Moreover, the research also assesses whether this multi-stakeholder environment is delivering on local content objectives.

It was apparent during my research that local content and its development in Uganda has clearly been analysed and scrutinised in considerable detail beyond the confines of the boardrooms and offices of Kampala; it has become an issue that, even those beyond the oil industry, have become sensitised to. This chapter's primary finding is that, despite the benefits associated with a localised business model, operators in Uganda have not universally adopted a localised approach to the employment and contracting of Ugandan nationals and companies, instead operators display varying levels of commitment. Respondents believe that the variance in operator commitment is defined by the company's own internal influences including the operator's corporate makeup (state or shareholder ownership) which engenders conflicting objectives, cultural heritage and size. The chapter dives

³ Tullow Oil, Total E&P, CNOOC Ltd (The Operating Partners) and newcomers Oranto Petroleum and Armour Energy

⁴ The Government of Uganda through the Petroleum Authority Uganda, the Ministry of Mines and Mineral Development, the Ugandan National Oil Company, the Ministry of Education Sport and other arms of government

⁵ Including but not limited to The World Bank, DFID, GIZ, Enabel, AfDB. Often referred to as the Development Partners

⁶ Including but not limited to CB&I, Fluor, Baker Hughes, Schlumberger

deeper to explore operator led local content development and adoption, highlighting the localised business model adopted by Uganda's only African based operator (exploration and production group), Oranto Petroleum⁷. Oranto Petroleum, a younger company without entrenched operating practices or a tendency to prefer non-African staffing, demonstrates exceptionally high levels of local employment and contracting. Interview participants contend that this data underline that provenance can play a major role in understanding how individuals and companies view and regard the capability of Ugandans. Because of Oranto's relatively recent entry into Uganda's oil sector, its lack of a production licence and its comparatively small size, it is discussed separately from the other operators in this chapter.

A further finding of this chapter relates to the benevolent and altruistic nature of multilateral organisations and donor agencies. In reflecting institutionalist political economic theory which states that individuals and actors are not only motivated by self-interest but also by concepts such as morality and benevolence, this study found that there was no evidence that development agencies subversively represent oilfield service companies and suppliers from their own country. Instead, the majority of respondents noted the importance of their interventions in developing Ugandan content and their role in championing market-based processes. The data infer that foreign service companies and contractors registered on the National Suppliers' Database are commonly Chinese, French or British, reflecting the nationality of the international operating partners in Uganda and not the development partners (donor / development agencies). The evidence suggests that the development agencies play an important role in the provision of technical expertise and funding in a country severely lacking both.

An additional finding presented in this chapter is the disproportionate effect that business uncertainty has on local content through the intermittent involvement of oilfield service companies and EPC (engineering, procurement, construction) contractors. Oilfield service companies have even reduced their presence on the ground in recent years, whilst some

⁷ Atlas Petroleum International and Oranto Petroleum as it is known outside of Uganda

have never been able to truly establish themselves. This has reduced their capacity to employ Ugandans and to play a role in its development in line with their own requirements. In highlighting the above findings, this chapter will triangulate the interview data, questionnaire data with published and provided figures from government and industry.

This chapter addresses my second research question, assessing what roles the leading stakeholders are playing in local content development and adoption in Uganda, notably looking at the attitudes and roles adopted by the operator community. In reflecting the topic posed by my second research question, this chapter also explores the differences that exist within the operator community, as well as the donor community, with regards to local content. Using a mixture of qualitative and quantitative data, as well as existing literature, I seek to provide an understanding of why operators approach local content in different ways. Similar comparisons are made concerning the donor community, looking at the re-emergence of the western donors and their relevance in this case study.

5.2 The Role of the Operator in Local Content and its Development

Operators are an employer of local people and contractors of local content, who have traditionally not been mandated to operate in a localised manner. However, as discussed in earlier chapters, there is a growing consensus that operators, as socially aware actors, should look to maximise value to the host nation, moving away from the notion of being purely extractive institutions. This narrative was voiced very strongly within the interviews of this research; Ugandan respondents expressed considerable concern about the future of their resources, keen that they and their fellow countrymen would be able to benefit. Whilst there might be a growing acceptance in western literature (Tordo et. al. 2013) that operating locally is more ethical and even potentially financially rewarding, this does not necessarily mean that it has been universally accepted or is being adopted.

A recurring feature throughout the data is the notion that the operating partners do not share the same attitude towards local content. The data infer that Tullow Oil has adopted a more localised business model than its fellow operators, utilising Ugandan labour and

demonstrating favour towards Uganda businesses where possible. However, the same cannot be said for the two remaining operating partners, with data suggesting that Total E&P is risk-averse in its engagement with Ugandan capabilities, noting rigid hiring procedures and preference for an existing global supply chain. Meanwhile, CNOOC possesses conflicting objectives; as a Chinese SOE it is mandated to deliver employment and contract opportunities for Chinese individuals and companies. Broadly speaking, we can observe that different operators, with different corporate structures, and experience respond differently to external pressures.

The aforementioned findings reflect consensus across questionnaire, interview and secondary data. Questionnaire respondents were asked to rate each of the companies involved in exploration and production in Uganda according to their commitment to certain aspects of local content. Respondents answered on a scale 1-5, '1' being not committed at all and '5' being totally committed. For the purposes of comparison between operating companies, responses have been aggregated. In Figure 11 we can observe that, across all indicators, CNOOC are clearly perceived to be less active than the two other operating partners, Total E&P and Tullow Oil. The results reinforce the notion that Tullow Oil was, and continues to be, the most committed of the operating partners to local content, achieving higher aggregated questionnaire results than any other company across all three components of local content. Ackah and Mohammed (2018) note similar sentiments across Ghana, where Tullow's operations progressed considerably quicker than in Uganda, with first oil being achieved in 2010.

Figure 11: Questionnaire Responses

Commitment to employing local people (1 being not committed at all - 5 being totally committed)
CNOOC - average 2.71
Total E&P - average 3.45
Tullow Oil - average 3.97
Oranto Petroleum - average 2.79
Armour Energy- average 3.14

Commitment to contracting local service providers (1 being not committed at all - 5 being totally committed)
CNOOC - average 2.55
Total E&P - average 3.12
Tullow Oil - average 3.58
Oranto Petroleum - average 3
Armour Energy - average 2.92

Commitment to developing / upskilling / training local people (1 being not committed at all - 5 being totally committed)
CNOOC - average 2.63
Total E&P - average 3.43
Tullow Oil - average 3.74
Oranto Petroleum - average 2.37
Armour Energy - average 2.33

In noting Tullow's superiority in the above data, respondents contended that Tullow Oil's farmdown of its operations in Uganda to Total E&P and CNOOC represents a considerable loss to the nation's local content aspirations, leaving Uganda's development project with two operational partners. The notion that Tullow Oil was the most committed to operating locally was strongly reinforced throughout the semi-structured interviews, with many participants highlighting Tullow's adoption of local content as a benchmark in the industry. A former Total employee noted the impact of Tullow leaving the market,

“The exit of company like Tullow, given the precedent it set, it was a blow (...) To me personally, I didn't, I wasn't working for Tullow. I was working for another operator, but it was a blow” (23 June 2019)

Meanwhile, although this study is isolated to Uganda, one senior government representative was keen to highlight Tullow Oil's reputation as a committed local operator across the African continent.

“In terms of in Africa, Tullow has created a big growth in developing local content. They are spot-on with money; they are on the table” (19 June 2019)

In the following two subsections we can observe that published data and that provided by the PAU is largely in alignment with the questionnaire results in Figure 11. Some of the data used comes from the OAG report of 2015, which is valuable for comparison as it is the last year that all three operating partners were fully operational in Uganda. Over the following years we can observe substantial staff downsizing and a reduction in overall procurement, the cause of which will be discussed further in Chapter 6. The 2015 data is also particularly relevant as a result of Tullow's farmdown, leading many respondents to discuss Tullow in the past tense.

5.2.1 Operator Employment

The data in Figure 11 infer that Tullow's commitment to local content is most apparent in its employment of Ugandans (aggregated result of 3.97 out of 5), this is supported by the published data in Figure 12. Interview participants also unanimously agreed with this sentiment and spoke fondly of Tullow's employment of Ugandans; an operator employee commented,

“It's on record Tullow were the most paying company in this country. All people in worked in Tullow can testify. There's no company that beating Tullow when it came to salaries, when it came to training, when it came to promotion, because that'll help think like 75% senior management, they were Ugandans and they were empowered”. (24 June 2019)

Figures 12 and 13 highlight the employment of Ugandan nationals against expatriates. Prior to the oil price crash and the end of the exploration period, the OAG report shows that Tullow operated with a vastly more localised workforce than the remaining operating partners. Importantly, Ugandans were also well represented in management and senior management positions, earning substantial salaries and benefiting from exposure to greater responsibility, an intangible but valuable addition to local content.

The area of most significant disparity between the operators is shown in Figure 14. We can observe that CNOOC and Total's local staff salaries only counted for a small percentage of the overall expenditure on staff wages (17% and 24% respectively in 2014), whilst 84% of Tullow's salaries went to Ugandan nationals. At CNOOC, 71% of the workforce received 17% of the overall remuneration, a similar ratio can be observed within Total. The calculation below in Figure 14 demonstrates that at CNOOC and Total, expatriate wages per individual were more than 10 times that of nationals; this salary gap was noted by respondents on many occasions throughout the interviews.

Figure 12. Operator Employment 2012-2014 (OAG Report, 2015)

Oil Company	Total number of employees			Nationals			Expatriates		
	2012	2013	2014	2012	2013	2014	2012	2013	2014
CNOOC	91	120	123	57	78	87	34	42	36
TEP	195	244	166	98	123	125	97	121	41
TUOP	184	182	143	168	169	135	16	13	8
Total	470	546	432	323	370	347	147	176	85

Source: OAG analysis of National Content Reports from oil companies for 2012-2014

Figure 13: Management by Operator (OAG Report, 2015)

Company	Senior management			Middle management			Lower management		
	Total	Nationals	Expatriates	Total	Nationals	Expatriates	Total	Nationals	Expatriates
CNOOC	05	00	05	63	06	57	64	64	00
TEP	10	01	09	95	63	32	61	61	00
TUOP	07	05	02	68	62	06	68	68	00

Source: OAG Analysis of staff lists from CNOOC, Total E&P, and TUOP as at December 2014

Figure 14. Operator Employment and Salaries 2012-2014 (OAG Report, 2015)

Company	Category of employees	December 2012		December 2013		December 2014	
		Number of staff	Amount (UGX)	Number of staff	Amount (UGX)	Number of staff	Amount (UGX)
CNOOC	Nationals	57	183,306,451	77	270,212,000	87	316,828,672
	Expatriates	34	1,448,747,277	36	1,505,739,129	36	1,502,862,690
	Total	91	1,632,053,728	113	1,775,951,129	123	1,819,691,362
	% to Nationals	63%	11%	68%	15%	71%	17%
TEP	Nationals	98	397,620,000	124	586,556,093	129	661,151,723
	Expatriates	55	2,790,388,948	92	4,972,070,149	38	2,103,601,187
	Total	153	3,188,008,948	216	5,558,626,242	167	2,764,752,910
	% to Nationals	64%	12%	57%	11%	77%	24%
TUOP	Nationals	168	1,063,494,469	169	1,686,961,848	134	1,557,423,106
	Expatriates	16	1,085,999,938	13	577,821,869	8	304,975,533
	Total	184	2,149,494,407	182	2,264,783,717	142	1,862,398,639
	% to Nationals	91%	49%	93%	74%	94%	84%

Source: OAG analysis of December salary payments from CNOOC, Total E&P and TUOP. Deletions and additions during the year not included

Average salary per employee (UGX): Nationals and Expatriates

CNOOC: Nationals 3,641,708.87 – Expatriates 41,746,185.83*
Total E&P: Nationals 5,125,207.15 – Expatriates 55,357,925.97
Tullow Oil: Nationals 11,622,560.49 – Expatriates 38,121,941.62

5.2.2 Operator Procurement

When considering the three most prominent companies in the industry, CNOOC, Total E&P and Tullow Oil, respondents were most critical of CNOOC’s contracting policy and responded most positively towards Tullow Oil’s. As we can see from Figure 15, it was strongly believed that CNOOC demonstrates a preference for Chinese service companies.

Figure 15. Questionnaire Results

81% of participants agreed that ‘CNOOC demonstrates a preference towards Chinese service companies’ whilst 19% responded to the contrary.
69% of participants agreed that ‘Total E&P demonstrates a preference towards French service companies’ whilst 31% responded to the contrary.
34.9% of participants agreed that ‘Tullow Oil demonstrates a preference towards British service companies’ whilst 65.1% responded to the contrary.

The following data (Figure 16) from the OAG Report allows us to triangulate these findings, although it fails to show the considerable disparity noted in Figure 15. It is worth noting that Figure 15 asks respondents to comment on service companies whilst Figure 16 shows overall procurement. A further challenge when comparing procurement data is that if overall procurement by company is at vastly different levels, it is difficult to accurately compare commitments. In the years following 2013, Tullow’s overall procurement drops hugely following the non-approval of its field development plans. When taking into account the overall procurement in Figure 16, it appears that there is no outright ‘best performer’. Despite CNOOC’s local procurement as a percent of total procurement being greater than Tullow and Total, it is, in part, attributed to fronting (discussed later in the thesis).

Figure 16. Operator Spending on Local Goods and Services between 2010 – 2013 (OAG Report, 2015)

Company	Category of Suppliers	2010 (USD)	2011 (USD)	2012 (USD)	2013 (USD)	TOTAL (USD)
TUOP	Ugandan	32,780,318	62,168,449	67,842,261	23,530,000	186,321,028
	International, registered in Uganda ¹	-	-	-	54,560,000	54,560,000
	International	99,171,458	203,439,576	139,974,188	8,300,000	450,885,222
	Total	131,951,776	265,608,025	207,816,449	86,390,000	691,766,250
	% Ugandan	25%	23%	33%	27%	27%
TEP	Ugandan	N/A	N/A	38,800,000	71,040,000	109,840,000
	International, registered in Uganda	N/A	N/A	61,500,000	182,500,000	244,000,000
	International	N/A	N/A	8,000,000	14,600,000	22,600,000
	Total	N/A	N/A	108,300,000	268,140,000	376,440,000
	% Ugandan	N/A	N/A	36%	26%	29%
CNOOC	Ugandan	N/A	N/A	21,859,831	11,869,118	33,728,949
	International, registered in Uganda	N/A	N/A	7,525,590	-	7,525,590
	International	N/A	N/A	35,870,169	26,494,547	62,364,716
	Total	N/A	N/A	65,255,590	38,363,665	103,619,255
	% Ugandan	N/A	N/A	34%	31%	33%
Total amount spent		131,951,776	265,608,025	381,372,039	392,893,665	1,171,825,505
Total paid to Ugandan Suppliers		32,780,318	62,168,449	128,502,092	106,439,118	329,889,977

Source: OAG Analysis of Oil companies' procurement data

However, it is important to recognise that a true comparison would require data which is not available as specific inputs are required at different stages of the project lifecycle and as is inferred by the above data, operators are not necessarily undertaking the same activities at the same time. For example, whilst indigenous construction capacity may exist in Uganda, operators have tended to require foreign contractors to undertake seismic surveys; the above data does not provide us with such a breakdown. An item of contention throughout the interview process was that Total and CNOOC were rejecting local suppliers used by Tullow, Hardman and Heritage in favour of foreign companies, despite these suppliers supposedly having the requisite expertise, this cannot be identified in Figure 16.

More recent data does reflect the notion that Tullow is more likely to procure from local suppliers, particularly in the absence of considerable activity in the industry. As we can

see from Figure 17, when Tullow's overall procurement was reduced to less than USD 3 million a year, at a maintenance level, the proportion of contracts awarded to local companies rose greatly. Logic suggests less costly inputs may be less technically advanced and more readily available in a nascent oil and gas industry. Data provided by the PAU for 2018 shows that when overall procurement (all three operators) was down to USD 14,364,196, only 33% of contracts were awarded to Ugandan suppliers, Tullow spent USD 1,600,000, a slight fall from 2017 when 96% of contract value was awarded to local companies, suggesting that Total and CNOOC have not been able to localise procurement related to the maintenance of their in-country operations.

Figure 17. Procurement Data for 2017, Petroleum Authority Uganda, National Content Conference 2019, Bulletin (USD)

	Total	Ugandan	Non Uganda	%age Local
Total	124,562,000	31,844,000	92,718,000	26
CNOOC	6,603,375	2,569,607	4,033,768	39
Tullow	2,671,008	2,562,413	108,595	96
over all	133,836,383	36,976,020	96,860,363	28

The notion that Tullow procures more from local business is not contradicted by the data, however ample data is not available for a clear comparison. In comparing Tullow's procurement data in Uganda with other operations, it is possible to note that data from Uganda is fairly consistent with other operations in Ghana and Kenya. In 2018, in Ghana, Tullow spent USD 251,300,000 with local suppliers, representing 29% of the total spend, whilst in Kenya, in 2018, where total procurement was USD 100,000,000, 37% of Tullow's overall supplier spend was with Kenyan businesses (shown in Figure 18). The lack of data from fellow operators in other countries renders it hard to compare whether Tullow's local procurement commitment is market leading globally. Analysis from Ackah and Mohammed (2018) appears to show that Tullow's proportional spend was higher than operating partner Eni in Ghana in 2016, although only a graph is provided without figure specific data. In putting these figures into context, an interesting reference point is noted by Olsen (2013), who commented that the highest industry-wide, operational, local procurement achieved is

74% in Norway in 1994, although it would be unrealistic to assume this can be achieved in most young, African oil industries for a long time to come.

Figure 18. Tullow Oil Local Supplier Spend by Country of Operation (Tullow Annual Report, 2018)

Local content					
	2015	2016	2017	2018	2019
Local supplier spend (\$ million)	308.9	336.6	234.6	283.4	336.2
By country	2015	2016	2017	2018	2019
Ethiopia	–	–	–	–	–
Ghana	226.0	297.0	194.2	251.3	298.8
Kenya	75.0	28.0	37.0	30.5	35.4
Mauritania	–	–	–	–	–
Uganda	7.9	11.6	3.4	1.6	2.0
Total	308.9	336.6	234.6	283.4	336.2

It was also proposed that CNOOC's procurement data may be distorted, suggesting that fronting may be the explanation as to why there is a CNOOC disparity between damning interview and questionnaire data and the local procurement data from Figure 16. Fronting, the process of establishing Ugandan companies in order to conceal the origins of goods or services produced by a foreign supplier, is a familiar practice in many underdeveloped or nascent hydrocarbon nations; literature notes its existence in Ghana (Ablo, 2015) and Nigeria (Nwapi, 2015b). A former operator employee and senior industry figure made the following comments to support this notion,

“Like I say on the background, the Chinese have got now all these other smaller Chinese companies registering in Uganda, I can't vouch for them saying those are typically Ugandan businesses because I know for a fact that money is not going to stay here”. (17 June 2019)

Although some reports do indicate that fronting is taking place in Uganda, evidence is unsurprisingly limited; one reports notes, “a source within the Ministry of Energy indicates that some international actors, aware of the inefficiencies of local firms, are registering

their own companies locally, fronting Ugandans as ‘conduits’” (Oil in Uganda, Dec, 2013). Questionnaire data supports this notion, 48.9% of respondents believed that fronting is being practised in Uganda (33.3% disagreed), whilst several interview respondents suggested that Chinese service companies and contractors were responsible for the fronting process. This in turn accounts for some of the scepticism as to the procurement processes of CNOOC in Uganda, with many respondents contending that the published figures may misrepresent the truth.

5.2.3 Operator Led Staff Development and Job Role Localisation

In following on from the previous sections, Tullow’s success in localising managerial positions can largely be attributed to a commitment to training, onboarding and accelerated programme which allowed employees to advance towards managerial positions. It was proposed to interview participants that Tullow began operating in Uganda prior to the other operating partners, allowing more time for job role localisation. However, respondents contended that CNOOC and Total have now been in the Ugandan oil for almost a decade and are still yet to achieve the same degree of job role localisation (local employment account for only 77% of the operator workforce in 2018, substantially below 94% of Tullow in 2014).

A considerable proportion of Tullow’s Ugandan staff who took part in this research had worked in Tullow’s head office in London (and continue to be posted to London in 2020) as well as other, more advanced operational sites. In line with Tullow’s global capacity-building policy, Ugandan employees were seconded to countries at more advanced stages of production to enable their staff to gain the critical experience required to execute tasks at higher levels of management (OAG Report, 2015, p. 26). As a whole, the company boasted 55% African employees across the whole business in 2019, growing annually from 49% in 2015, ensuring accurate representation from its countries of operation (Tullow Oil Annual Report, 2019). This notion that Tullow’s contribution to personal development was far greater than that of their operating partners was frequently proffered throughout the interview process and was attributed to the development of a more localised workforce. An operator employee noted,

"CNOOC took some people (to China) but not to work there, just two weeks training, three weeks training, Total had graduate trainees took them to France for training, one year and they came back. Now the difference between the Total, CNOOC and Tullow is that Tullow took some guys as graduates, trained them and also paid them and they were staying in London office, so doing the work that was the difference. These ones take them training them and come back ones but these ones from Tullow were working there. It was like an exchange programme"

Figure 19: Operator Training Commitments for their Staff 2012-2014 (OAG Report, 2015)

Company	Year	Total cost (USD)		Variance	Percentage utilised
		Planned	Actual		
TUOP	2012	2,720,532	1,293,609	1,426,923	48%
	2013	2,069,706	1,095,342	974,364	53%
	2014	1,998,700	1,206,622	792,078	60%
	Total	6,788,938	3,595,573	3,193,365	53%
TEP	2012	770,857	195,670	575,187	25%
	2013	1,188,068	1,090,906	97,162	92%
	2014	1,408,400	1,323,273	85,127	94%
	Total	3,367,325	2,609,849	757,476	78%
CNOOC	2012	1,100,000	578,320	521,680	53%
	2013	570,200	291,227	278,973	51%
	2014	840,000	654,319	185,681	78%
	Total	2,510,200	1,523,866	986,334	61%

Source: Training plans and reports from TUOP, TEP and CUL for 2012-2014

Duration	TUOP*	CNOOC	TEP
1-3 days	29	54	49
4-7 days	89	14	73
8-30 days	04	05	14
1-3 months	04	01	14
3-6 months	04	01	03
Over 6 months	33	04	01
TOTAL	163	79	154

Source: Training reports submitted for audit by oil companies.

*The duration of trainings organised by TUOP in 2014 was not submitted to Audit.

Figure 19 supports the above quote, Tullow invested more into staff training and commitment to longer training programmes, although it is worth noting that Total's spend increased and surpassed Tullow in 2014 as Tullow's business commitments in Uganda decreased. Even in the absence of Tullow's 2014 data, the operator delivered substantially more training which lasted for more than six months. An OAG report noted that CNOOC claimed unforeseen circumstances for the under-utilisation of funds. Alarmingly the report also found that the PEPD (Petroleum Exploration and Production Department⁸) had also not followed up with the oil companies to ascertain the reasons for not utilising their training budgets as planned. The short-term nature of these trainings was considered a concern, only 1% of Total's trainings lasted over six months, 5% of CNOOC's and 20% of Tullow's.

The above data are corroborated by questionnaire data from this research and were strongly reinforced during the interview process. Respondents largely refuted the notion that 'All operators are equally committed to local content development', with 46.6% either disagreeing or strongly disagreeing, and 32% agreeing or strongly agreeing. Interview data was substantially less divided with the vast majority of respondents praising Tullow's commitment to developing its employees; this may, however, be as a result of the positive wording used in the survey question. Most interview respondents, including CNOOC staff, were very critical of CNOOC's commitment to its own employees' development. A telling quote was delivered by a senior government employee concerning CNOOC's commitment to training,

"In Uganda here, you have to squeeze them to put money on the table. (In reference to CNOOC)" (21 June 2019)

⁸ Petroleum Exploration and Exploration Department, now the Ministry of Energy and Mineral Development

Whilst the size of the investment in training and upskilling is one factor, interview respondents reinforced the value of accredited training and HSE certification in empowering Ugandans employees to further their careers. A former operator employee (non-Tullow) noted the role certification within the training process, a factor which permitted the Ugandans to take up integral positions at Tullow. Seemingly, these opportunities have been less forthcoming at Total and CNOOC,

“But if I can put this to you, how come same positions that are being contested, how come Tullow had these local people in the same positions? Why? Tullow had a company the British Lloyds, to offer them training, certification, they were taking their staff for these certifications” (20 June 2019)

A similar narrative can be observed from scholarship data (OAG Report, 2015): between 2012-2014, Tullow sponsored 51 students for Master’s Degrees in the UK; Total sponsored nine for Master’s Degrees and gave them pre-employment contracts, whilst CNOOC sponsored 70 TVET students in Uganda, three students for Masters, and two at undergraduate level. It is worth noting that the TVET graduates themselves would be unlikely to take on roles within an operator without an academic degree to accompany it, as such it could be assumed that CNOOC’s 70 TVET scholarships were never meant to support the education of future CNOOC employees. Between 2012-2014, Tullow also committed more funds to the training of government staff than the other operators, although Tullow’s trend is downwards and Total’s upwards. It was noted by the OAG report that:

“TUOP (Tullow Oil) also cited scaled down activities in 2014 as a reason for reduced expenditure on training of government personnel. This is in contradiction to TEP whose activities had also been scaled down, but still committed more funds to training government employees. No explanation was given for the reduced budget and expenditure by CNOOC for training of government personnel in 2014, yet their activities had increased” (OAG, 2015, p. 39).

The extensive OAG data from 2012-2014 support the perception that Tullow was more committed to developing local content, notably before the delay and oil price crash as will be discussed further in Chapter 6. Respondents believed that the oil price crash and delayed development project had a profound impact on operators' willingness to invest local content development as the operators see their planning horizon, the ability of an organisation to plan into the future, greatly reduced. This notion is reinforced when we compare the investment in local content development and compare them with PAU provided data from 2018. The PAU data noted that the all operators collectively spent USD 439,962 on 'Local Content Development' as a whole in 2018, a huge reduction from 2012-2014. However, as will be discussed in Chapter 6, the falling spend does not necessitate a reduction in effectiveness.

5.2.4 Operator Intervention in Ugandan Education and Training

An unfortunate reality of Uganda's education system, and that of many nascent hydrocarbon economies, and even some more developed oil producers (Fakeeh, 2009), is that oil and gas courses, both university and vocational, are poorly aligned to industry requirement. Survey and interview responses suggest that operators have been involved in the development of indigenous oil and gas / TVET courses. However, respondents shared varying perspectives on whether operator involvement has been adequate, given it is the industry that defines its own capability requirements. According to the survey data, only 17.1% of respondents strongly disagreed or disagreed that 'Operators have played a leading role in developing local competences (human and supplier)', whilst 55.3% strongly agreed or agreed. A more focused question, which by its nature excludes internal training, returned further evidence to suggest that operators have played a leading role in indigenous education development. 46.7% of respondents strongly agreed or agreed that 'Operators have pooled resources (in clusters) to train / up-skill nationals and raise local capacity for education and training', whilst only 24% disagreed.

Interview data was more mixed. A number of respondents were dismissive of the operator involvement in broad-based local content development and specifically curricula developing, citing that little progress has been made in achieving greater alignment across

Uganda's many academic and vocational institutions. However, many interview participants contended that operators, originally Tullow and more recently Total and by extension CNOOC too, have gone beyond the traditional remit of oil and gas companies in order to direct and address the development of requisite skills. It was frequently noted that Tullow attempted to influence the direction of UPIK's curriculum around the years of its inception, although, it is widely reported that this guidance was not heeded, as a university lecturer commented,

“So Tullow, he complained to UPIK and they should just train people in the skills of welding and so on and so forth. Not about oil and gas drilling operation. So that collision has arisen around skills also”. (19 June 2019)

As will be discussed in Chapter 7, operator involvement in curriculum development and the capacity development of institutions has been severely hindered in recent years by the poorly functioning sector skills council. Respondents were keen to point out that the government and academic institutions have been very culpable for failures in education, with a number of experts highlighting that the delivery of reports such as the Industrial Baseline Survey (2013) and the Capacity Needs Analysis (2016) should have provided the required direction for Ugandan institutions. Applying an Austrian contribution to institutionalism, namely that people and organisations are not perfectly informed, the failure of the market for education to align itself with the industry can largely be attributed to the ignorance of the institutions and governance, rather than purely operator inactivity.

Away from the formalised channels of engagement, there was a perception that operators did not seek to interact or engage with students at Ugandan institutions. An operator employee noted the interaction between operators and institutions; his comments mirror a considerable number of young professionals in Uganda,

“Most of these operators will come interact with students because they are after something, maybe a licence or something. While I was at school, we had a lot of Total people come in, but it wasn't about sharing the necessary skills or equipping us with the skills. It

was more coming for the presentation, let's say a particular subject and then just, you know, they will take you through the presentation on geophysics and take you through what happens at the sites but not in way to say that, you know, hey, this is a skill, you need this particular skill. But they didn't put it out there. Just share a few slides, maybe one or two days and that's it." (23 June 2019)

As a result of the lack of alignment between the industry and the tertiary education system in Uganda, a number of participants suggested that operators circumvented Ugandan institutions through the vehicle of international scholarships. Following the GoU attempts to push aspects of local content to CSR (which is non-recoverable, discussed later in the chapter) any investment in indigenous institutions and curricula development is unlikely to be tax recoverable against future earnings in the way that scholarship and other conventional, largely internal, local content development is. This provides further incentives to bypass indigenous institutions in favour of established international universities in the UK, China, France and Australia. One Ugandan commented on their experience as a student in China, having been sponsored by CNOOC,

"Training is based in China and when you go back to China to be training really a bit of language barrier and what I've seen all operators send that to employees for training in their respective countries. They can divert you. Maybe you go to this country. So for me, training's the main factor, but wherever it has its disadvantage, it's limits people to learn more because maybe language barrier or environmental influence." (23 June 2019)

In building on these remarks, commentators including Andrews and Playfoot (2015) have highlighted the lost opportunity of taking promising students abroad to study, as funds could have also been channelled into local academic institutions and creating additional in-country value. As recognised in my personal work, working towards the creation of a centre of excellence in-country, delivers long term opportunities for education and training, in many cases at a fraction of the cost of cherry-picking students and diverting them to institutions overseas. This is often achieved through vehicles such as academic partner-

ships for capacity development, between established international institutions and local institutions, and often requires significant support from external partners. In this study, as will be discussed further in this chapter (and Chapter 6 and 7), creating exceptional institutions, be they vocational or academic, has been reliant on foreign intervention. A prominent example of this being the Uganda Petroleum Institute, Kigumba which has benefited greatly from the support of donors via the Employment and Skills for Eastern Africa Programme (E4D/SOGA - discussed further in section 7 of this chapter and Chapter 6 and 7).

My work at Getenergy demonstrated that operators can play a more dynamic role in developing capacity in indigenous education and training. In Ghana, operators, including Tullow and Eni have supported programmes such as the Getenergy Field Ready project which addresses curriculum challenges and puts young professionals through an intensive employability programme whilst also upgrading an existing Ghanaian institution. One reason as to why this specific project has not been implemented in Uganda is objections from Total, notably one expatriate manager who has since moved to another country of operation.

5.2.5 Operator Involvement in Supplier Development

As the oil industry defines its own standards, it might be expected that there is a degree of collaboration between operators and nascent suppliers. This study found that there are fewer initiatives to support the development of nascent suppliers than there are to support local skills development in Uganda, mirroring the dearth of literature on SME development for the oil and gas industry. An industry leader concurred, noting that there has been a dearth of initiatives to aid local companies from all sources,

“Private companies, small companies are coming up. it has been up to them to find finance, it has been a challenge to some of them, yeah it has been themselves. There has not been so many initiatives coming in to develop these companies and some which are there, they are not well managed.” (20 June 2019)

With the exceptions of the Stanbic Bank Business Incubator, a project run out of the CSR arm of one of Africa's largest banks, and government investment in the Kabaale Industrial Park (financed by a loan from by UK Export Finance and yet to be completed), no significant interventions were mentioned during the interview progress. Sen (2018) concurred, noting that there are limited capability development interventions and supplier credit-facilitation initiatives in place across the stakeholder community in Uganda. The operators' limited role in this area is perhaps best reinforced by the Industrial Baseline Survey document, which highlights three limited and fairly passive, actions to support local companies. In summary, these actions are, (1) greater communication between oil and gas companies and Ugandan industry, (2) creation of an Industry Enhancement Centre⁹ and (3) supporting the Ugandan education system (Hamman, 2013, p. 22).

Most respondents contended that operators had not sought to involve themselves greatly in local enterprise development, token examples include Tullow's establishment of an enterprise development centre in Hoima, providing business development advisory services to local SMEs. There are also reports of channels for operators to advise and guide local enterprise, such as the establishment a local farmers' development initiative through a local NGO (Traidlinks). However, the OAG Report (2015) infers that there have been no measurable outcomes from this. Despite the meagre nature of contributions, interview participants almost universally believed that operators should not be doing more. Instead, the burden of developing local SME capacity must lie with the companies themselves and the Ugandan government. A Ugandan operator employee made the following comments to this end,

"It's the role of government to ensure that Ugandans are ready to tap the gains from oil and gas industry and the suppliers themselves. Because when you sit as the operator, the burden of preparing Ugandans so that you can give them jobs. It doesn't make sense." (18 June 2019)

⁹ Industry Enhancement Centre is to be led by the GoU and yet to be launched. Descriptions of its objectives are ill-defined.

Whilst other initiatives might be going under the radar, it is very clear from the data obtained that operators do not readily seek to involve themselves in the development of local enterprise. As will be discussed further in Chapter 7, it was noted that the GoU has also failed to deliver leadership in this area, a factor that has been exacerbated by the decision to delay the field development project, sending many local suppliers into liquidation.

5.3 Explanations for Divergence in Operator Attitudes

A number of explanations were proffered during the semi-structured interviews to explain these findings, namely why operators display varying attitudes and commitments to local content and its development in Uganda. In acknowledging the varying commitments of the operators to local content, respondents pointed to the provenance, history and factors relating to structure and ownership of the companies. In turn, it was noted that these factors engender different corporate objectives, beyond purely making profit, different business models and varying relationships with local content. These include the desire to retain control in the hands of trusted non-indigenous managers, aversion to risk in the supply chain and in the recruitment process, as well as objectives divergent with local content such as the perennial goal that Chinese SEOs will deliver jobs for Chinese nationals. Some respondents also noted racist or xenophobic bias and how this affects the utilisation of Ugandan capabilities. Whilst Chapter 6 focuses more on the evolving external pressures that I believe have largely arisen during and since the oil price crash, below we can observe largely internal pressures which have historically guided and continue to influence operator attitudes towards local content.

5.3.1 Conflicting Objectives of Chinese NOCs

According to Spornberger & Amineh (2016) and Ma (2007), the international expansion of Chinese NOCs, with its roots in the 1999 “Go Out” policy (Wu, 2018), is consistent with the requirement to continue to provide work for the millions of Chinese people in their employment. Ma highlighted that “with more than three million staff to employ, the NOCs have to seek new business opportunities in order to survive. Overseas expansion could

provide the NOCs with not only new reserves, but also work opportunities for their employees, not to mention more contracts for the large Chinese petroleum services industry covering engineering, drilling, and other oilfield services as well as manufacturing” (Ma, 2007, p. 41). Many experts concur, Meidan (2016) summarises the role of the Chinese NOC as an instrument of governance, noting its role as a strategic asset in ensuring oil supply, taxable revenue and employment for its citizens.

The findings of this research are consistent with the academic consensus that an objective of Chinese NOCs is to provide employment for Chinese people and as such, is therefore in conflict with interests of local content development in Uganda. Within this research, it was perceived that CNOOC possesses a negative orientation towards local content and respondents attributed this to two causal factors: the desire to maintain control over the operations and prejudice against Ugandans. It was believed that CNOOC possesses a desire to ensure that Chinese employees remain in control of their Ugandan operations and their investments. This, coupled with a lack of belief in the capabilities of Ugandans and Ugandan business, was seen as main causes for the company’s lack of commitment to local content. In reaffirming this, respondents noted that CNOOC is devoid of Ugandan management staff, apart from one Ugandan manager whose responsibilities are reportedly limited; data from 2014 shows no Ugandan senior managers, whilst there were five expatriates and that there were six Ugandans in middle management whilst there were 57 expatriates. One operator employee made the following comments, reflecting the notion above,

“For every head of department, there is one of them in charge of everything and it is one of them (Chinese), commercial, logistics, national content, control and supply, freight and forwarding, and materials, all those section managers are also Chinese. The directors and the head of department is also Chinese, the logistics supervisor is Chinese, if you are very lucky you will find a Ugandan as an officer, then a private driver for them. The top position will always be reserved for them”. (25 June 2019)

The lack of commitment to localise management positions is seemingly reinforced by CNOOC's involvement in local content development. As discussed in 2.3, whilst Tullow, and Total to a lesser extent, sponsored a good number of young Ugandans to undertake Master's degrees between 2012-2014 (51 and nine respectively), CNOOC elected to sponsor 70 Ugandans to undertake TVET courses in Uganda. This data suggest that Tullow and Total intended that these highly educated Ugandans would have the capacity to transition into senior technical and management roles within the company. Meanwhile, CNOOC's commitment to TVET education, albeit very important for broad-based capacity development for the wider industry in that the courses are accredited, suggests that the operator's succession planning is less likely to involve Ugandan personnel.

To some respondents, the use of expatriate labour in some particular managerial positions is indicative of a predisposition which excludes local content, especially when Uganda possesses managerial capabilities in these area in other industries, notably finance and logistics. A former CNOOC employee and current operator employee made the following comments,

"We would have the Chinese head of finance department. Why? Because in Uganda we have banks, we are finance students who are working. We have human resource. We have personnel that are being managed but you find the head is being managed by a Chinese, French, Chinese or French over even things which are totally local. So this one make me feel there is a strategy of maximising control". (18 June 2019)

Explanations for this were broad, but largely centred on the notions that locals were not trusted by the Chinese NOC and as such, maintaining Chinese personnel in charge of operations would ensure the venture's success; a former operator employee concurred,

"We go as the business, this is our money. We need to get it back. So, it has to go with our people. We give them jobs, we pay them high, then we bring them back. Because if it wasn't that, they would still be paying Ugandan and foreigners at least moderately". (25 June 2019)

Equally, a number of respondents believed that CNOOC management displayed elements of negative prejudice towards Ugandans. Interview participants were keen to share their stories and opinions about Chinese CNOOC employees and their attitudes in Uganda. It was highlighted that there had been improper conduct towards Ugandans at both CNOOC and Total, however, only expatriates at Total were cautioned. Another operator employee highlighted a Chinese manager's comments concerning a woman's place in the oil and gas industry, the respondent noted,

"He kind of said it in an arrogant way that woman can't be drillers, he is Chinese. When you come to Total, women are the drillers". (23 June 2019)

There was also clear narrative, in more informal parts of the interviews that Ugandans found some of their Chinese colleagues' habits to be unusual. In turn, this may have led to respondents providing more emotive responses when discussing Chinese participation in Uganda. However, the frequency of these negative remarks raises questions about the potential for harmonious working relations, especially when taking into account the number of CNOOC employees and former employees who took part in this study. A number of respondents contended that negative employment experiences helped CNOOC take advantage of regulatory loopholes in order to maintain its expatriate staffing. One former employee highlighted the strategies used, noting that unhappy staff will leave the company which reinforces the need to maintain Chinese staff,

"It's like it's a game. I think it's a game of money. So, what they do, Chinese, they employ you after five years of them 'Ugandising' the company. Instead of recruiting Ugandans to take over the position over expats, they drain the salary, they increase with \$4 on your salary annually. So, you get bored. Then (name removed) walks out. So, when (name removed) walks out, now we are going to recruit new people. So, these people need to be trained by our expatriates here. So, there is a game they play and it's totally different from what government is requiring." (25 June 2019)

This research is consistent with the aforementioned literature on Chinese SEOs (Ma, 2007; Meidan, 2016) in that the data highlight that CNOOC has sought to protect managerial and senior officer level roles in order to deliver employment opportunity to Chinese nationals. One would suggest that the large body of roles occupied by Ugandans within CNOOC, frequently menial in nature and poorly paid, is unlikely to be attractive to Chinese nationals. As such, within the business model, there would exist an optimum level of Ugandan nationals and Chinese expatriates.

Whilst respondents highlighted maintaining control and racial prejudice as the primary explanations for the lack of opportunity afforded to Ugandans at CNOOC, it is seemingly true that many respondents did not consider that CNOOC is also tasked with delivering employment for Chinese citizens. Nevertheless, the data obtained in this research is consistent with the established consensus that an objective of the international expansion of Chinese NOCs is to create further employment opportunities for Chinese nationals. The same can also be applied to procurement, as noted by Ma (2007), Chinese NOCs look to provide business and employment for NOC subsidiaries and other SOEs. This was corroborated by my research with respondents suggesting that CNOOC has not sought to localise procurement.

5.3.2 The Inflexibility of IOCs

Authors including Andrews and Playfoot (2015), Kalyuzhnova (2008) and Luong (2010) have recognised that IOCs have not traditionally been aligned with local content objectives, preferring to procure goods and services from established, international suppliers. This narrative is consistent with the data received in this study as respondents' criticism of Total E&P corresponds largely to the traditional paradigm of international oil and gas operations. The data infer that Total E&P, as an established IOC, has entrenched ways of operating, most notably in areas of the recruitment, onboarding and procurement.

A recurring theme throughout the interviews was that the larger operators, Total and CNOOC, being more globalised in nature, may struggle to respond to pressures at a local

level, as is broadly supported by Wheeler et. al.'s (2002) appraisal of Shell's local commitment in Ogoniland. As such, smaller companies like Tullow and Hardman, (According to Annual Reports, in 2018 Tullow employed 990 staff, approximately 17 times less than CNOOC and 100 times less than Total) may find it easier to adjust procurement mechanisms in order to satisfy demand for greater local content. Respondents noted that Total E&P had been unwavering and operated in Uganda as if it were a business unit of a global business rather than a localised operation. As listed in Figure 17, only 26% of Total's procurement in 2017 Uganda went to Ugandan companies, demonstrating little progress away from international and established suppliers and maintaining a similar level of local procurement to 2012. It was noted that Total, and to a lesser extent, CNOOC, have demonstrated a lack of confidence in local suppliers, even when they have been contracted by the operators and exploration companies that preceded them. One former operator employee noted,

"I was surprised that a company like Mineral Services Limited (MSL) are up in arms. Even now they (Total E&P) will give a contract to another company, because I'm told that, I need to get facts right here (...) I'm told that they're going to be kicked out because they do not prequalify, that's a huge investment. Remember? They invested a lot, but it's quite tricky to find that someone like them, who has been in the industry since the inception that was way back and started with Hardman, Heritage and Tullow". (26 June 2019)

In developing this point, a number of respondents strongly contended that the newer operators, Total E&P and CNOOC, had introduced new higher standards for their suppliers, a factor that made it more difficult for local suppliers to compete with their international counterparts. Respondents were keen to observe whether Total elected to choose an approved Ugandan producer of firetrucks or an established French company, noting this would be a further litmus test, as the Ugandan Civil Aviation Authority has approved and procured these locally produced firetrucks. However, since the interview phase of the research, all calls for tenders have been postponed and as such there is no indication as to whom would have been chosen.

Respondents also highlighted Total's approach to recruitment and onboarding, claiming that the operator did not seek to expedite the onboarding process to fast-track Ugandans into the company, seemingly a more challenging prospect in a major corporation (Belzil & Bognanno, 2004). One former operator employee noted,

"The French and Total, as I said, they been in the business for long, so they have their own standards that they follow. So actually, that one was giving the government a hard time, because they would tell them this is what we want, this is how we do things. Even if they have a person on a training, it would take according to their system that they are following, you either enter as a graduate trainee and then you go through the graduate program and you are not earning lot of money". (24 June 2019)

This inflexibility was also perceived by a number of respondents who highlighted the company's unwillingness to react sympathetically to recent strikes in Kampala. The strike concerned issues of pay, benefits, training, leadership, communication and career development. Interview participants claimed that Total refused to increase wages. This was reinforced by the media outlet, New Vision. The publication also quotes that "employees also demanded for a signed declaration stating the deadline by which all national staff should know their training and career development path. (...) But to date there has been no salary enhancement and no communication on training and career development, according to statement circulated by the employees" (Odyek, New Vision, 2017, Uganda).

As with CNOOC, respondents were universally critical that more concessions had not been made in favour of local employees and businesses. The frustration was very evident throughout the interview process, and despite Total's recent role in the E4D/SOGA project, participants also delivered a number of sweeping remarks regarding the 'French approach' to business, being an approach that seemingly cared little for local people. However, greater analysis shows that rather than a national characteristic, Total's slow adoption of Ugandan content is a reflection on the business's size and established operating procedures.

5.3.3 Tullow Oil, The Independent Oil Company

Explanations provided for Tullow's primacy in areas of local content were often quite simplistic in nature. A great number of respondents contended that it was no surprise that a British company was most forthcoming, referencing that British and American firms, were more forward-thinking and demonstrated greater understanding of the business environment. More critically aware responses noted factors such as Tullow's size, being considerably smaller and potentially more responsive to change than the other two operating partners as well as its orientation towards nascent resource nations on the African continent, which, in turn, has defined its commitment to local content. It is generally accepted that smaller businesses can be more adaptive when required (Kuratko et. al., 2001), however, as some respondents suggest, Tullow's commitment to local content is linked to the application of a business model which is pre-emptive of stakeholder pressures.

I contend that Tullow is more aware of the expectations of local people and governments in frontier hydrocarbon nations primarily because Tullow's portfolio is itself defined by its focus on frontier nations, such as Uganda, Ghana, Kenya, Namibia and Guyana. As Tordo et. al. (2013) noted, many public officials in nations with recently discovered hydrocarbon resources were (and are) anxious to obtain the greatest benefits for their economies; the authors' work being particularly relevant to a discussion about Tullow, considering the operator's growing portfolio and development projects in frontier nations around 2013. Correspondingly, it appears that Tullow's business model takes into account the apprehensions of indigenous stakeholders in nascent oil economies in which Tullow operates; apprehensions that are rightly heightened by the numerous nations that succumbed to the resource curse the 20th century. Despite not being a paradigm of a localised operator, as proven by a number of media publications (including in Uganda as noted in Chapter 4), a Tullow annual report highlights this awareness of indigenous expectations, it was noted that "insufficient Local Content expenditure and focus may jeopardize our license to operate" (Tullow, Annual Report, 2013, p. 45).

It is also clear from Tullow's annual reports that the company is keen to progress and promote its proportion of 'African' staff reflecting Tullow's countries of operation and as is highlighted by the company website to 'create sustainable benefits' and 'create value for

stakeholders'; it is worth noting that 'stakeholder engagement' forms a major part of the company's online presence. Correspondingly, Tullow's attitude towards local content is more consistent with a localised business model and actualising benefits, including better community relations, lower salary costs, shorter supply chain, reduced inventory costs and lower logistics costs etc (Andrews & Playfoot, 2015; Steckel et. Al., 2004).

5.4 Contributions to Local Content Development Through Corporate Social Responsibility Projects

A telling factor in understanding operator commitment to local content development is the willingness to engage in activities beyond recoverable spending. Whilst some aspects of CSR in Uganda are unlikely to influence local content and its development, such as Tullow's funding of the new health facility in Buliisa, other non-tax-recoverable aspects of CSR such as funding for a wide range of academic establishments can be beneficial for localisation objectives. Whilst there is not a huge amount of published information on these CSR projects which aided local capacity development, respondents spoke extensively on the topic, noting Tullow's readiness to undertake CSR projects and the other operators' unwillingness.

Academic literature on Corporate Social Responsibility (CSR) in oil and gas can reflect a broad range of social and economic interventions. CSR can be proactive in that a firm may seek to achieve a range of business objectives through CSR activities; CSR activities are often attributed to improving a firm's reputation, fostering customer trust and contributing to development of the firm's important intangible resources (Branco & Rodrigues, 2006; Orlitzky et al. 2003) and resultantly are seen as a vehicle to advance a company's own objectives. Equally, CSR can be reactive, responding to pressures from political and societal groups. Taking the Weberian construct of embeddedness (1922) at its most broad, CSR provides operators the opportunity to become more embedded in Uganda's society through engaging in the alleviation of challenges in the wider community. Away from operator organised football matches and environmental monitoring, CSR and local

content development often overlap in Uganda according to this study's respondents. One respondent noted,

"In some cases, they overlap, of course, there are some time it is clear cut CSR, maybe construction of health, cars and stuff. That's CSR, really not skilling. Right. But if you're training technicians but in that area around the region, is that CSR or is that national content". (20 June 2019)

As in the preceding sections, respondents were eager to criticise CNOOC's involvement in Uganda's oil industry, in this case noting an unwillingness to engage in CSR activities, including those that may and may not benefit local content development. This is in line with existing research, Wu (2019) highlights that Chinese oil companies are reactive in that their CSR commitments are satisfied more frequently when indigenous groups are cohesive and unified and the presence of a regulatory framework which is upholding on inclusive policies regarding civil society, competitiveness and decentralisation. Meanwhile, respondents believed that Tullow Oil was unquestionably the most committed to its social responsibilities. One local consultant and former senior operator employee noted the following,

"Initially, Tullow actually did more CSR than national content before all these legislations come to play and still then did a lot of CSR too. "It's the good thing to do, let's do these things" (...) you know, CNOOC tried to get away with a little bit of school repairs" (26 June 2019)

The respondent claims that following the Industrial Baseline Survey (2014), the oil companies moved towards implementing strategies that might help actualise the objectives outlined in the report. Concurrently, the regulator tried to push some activities to CSR rather than local content which was not recoverable against future earnings. This meant that by 2014, CSR was consuming a substantial proportion of Tullow's expenditure which in turn saw a contraction in CSR spending.

The logic for assessing commitment to CSR in Uganda is that, in some cases, broad based initiatives to increase local capacity (including those mentioned in 2.4 and 2.5), have fallen outside of recoverable operator costs. Tullow's award-winning CSR project (East African CSR Awards 2010) in Kaiso-Tonya was recognised in part for its commitment to the 'supply of schooling and school construction material and capacity building of education stakeholders'. The notion presented by many of the respondents was that Tullow's contribution to localisation extends beyond mandated requirements and tax-recoverable spending, meanwhile, CNOOC and Total E&P's inactivity in this area is seemingly indicative of the companies' operating models. A lack of published data does suggest that Tullow's non-recoverable CSR / capacity development activities were slightly overstated in the interview data received, however it is clear from the overriding narrative in this research that Tullow's involvement in this area was substantially greater than fellow operators.

5.5 The 'African' Operator

The study also looked to address the role and attitudes of the new companies entering the market (Oranto Petroleum and Armour Energy), as well as the original operators who preceded and were acquired, or whose stake was acquired by Tullow Oil (Heritage Oil and Hardman Resources). Given the time elapsed, respondents found it difficult to speak with confidence about the latter two companies. Hard data are also difficult to find from the earlier exploration years when Heritage and Hardman were the only E&P / operators, Kjær (2013) and Hansen et al. (2014) using estimates from the Ministry of Energy and Mineral Development's 2011 report, noted that the share of national content during the phase of exploration is presumably low, probably around 15% (MEMD Report, 2011, p. 6).

Many respondents were keen to discuss Oranto Petroleum's position in Uganda's oil and gas industry, as a company with 'African' origins (Nigerian based), comparisons were made with the 'western' or 'white' and / or Chinese companies operating in Uganda. It was widely remarked by participants that Oranto has adopted a localised business model which according to respondents, highlights that Uganda does have indigenous capacity

capable of supporting an almost fully localised operator. An operator employee commented on the attitude of an African company operating in Uganda,

“If they are local African companies, I see them being more interesting because for them they know Ugandan company can do work. So, they will give it. They know Ugandan personnel can do this work. So, they give him a job”. (26 June 2019)

The narrative that African companies would be more inclusive and employ a business model that is more conducive to local participation was frequently proffered throughout the semi-structured interviews and is reflected by the questionnaire data. Responses were focused around positive attitudes towards the ability of local people to carry out the work frequently contracted to foreign individuals and companies. In observing a manifestation of this, one respondent reported that all but one of Oranto Petroleum’s employees in Uganda, are Ugandan nationals, whilst one senior manager is Nigerian. Although Oranto Petroleum in Uganda is currently a company of less than 20 permanent employees, the company has demonstrated that it is confident in the ability of Ugandans to undertake the running of the business. A representative of Oranto Petroleum made the following comment to this end,

“For example, in Oranto, the human resource, we are a hundred percent nationals. Only one guy who is on top and he's the general manager for external investments from Nigeria”
(...)

“Oil companies would appreciate it if you Ugandan companies are prepared (...) Most contracts are 100% Ugandans. In fact, I was writing my annual report the last year, I give out 99% contracts of contracts to Ugandans (...) When we want some services, for example, that data interpretation and systemic data capture, seismic survey we had to go out. We look for all companies, for companies which can do the service are not here, so we have to skip to London for the data interpretation. Then we went to Oman to get AMC to do offshore survey” (21 June 2019)

In developing this notion that an operator with African origins adopts local content more readily than a Western or Chinese firm, the respondent continues to make comparisons between employment experiences at CNOOC and Oranto Petroleum,

“I don't know why they (CNOOC) thought I can't do anything. So then when I crossed to (moved to) Oranto, I sit with them on the same page. I plan for Oranto as they're planning for CNOOC. I have executed the impact assessment. I have executed systemic offshore survey, which is even more sensitive than what they have done. And but still they tend to create that Ugandans not able” (21 June 2019)

The respondent contended not only that Ugandans had the required capabilities, but also that Oranto Petroleum was benefiting from lower “risk allowances and house allowances”. Oranto Petroleum, albeit small in comparison to the other operators, employs a greater proportion of nationals in its own workforce and contracts a greater proportion of work to local service providers than any other operator in Uganda (approximately 99% of contract numbers awarded to Ugandan companies). A number of Ugandan respondents contend that a telling factor in the capability of Ugandans is that Oranto functions in the absence of foreign experts and experienced Western or Chinese managers, instead the company relies on local capabilities.

Questionnaire data did not concur entirely with the sentiments expressed throughout the interviews, however, this may be as a result of a smaller number of informed respondents concerning Oranto Petroleum and Armour Energy¹⁰. The questionnaire data highlight that Oranto and Armour Energy have been less impactful with regards to local content development, reflecting the size of the firm but also the finance available for developing local capacity. Whilst respondents within Oranto Petroleum were content to talk about the company, the same cannot be said for Armour Energy. The company's representatives in Uganda refused on multiple occasions to take part in the study. Research participants

¹⁰ Questionnaire response for Oranto Petroleum and Armour Energy were substantially less than others, largely as a result of these companies being smaller and newer to the market. There was a greater variety of response, with number of respondents selected ‘1’ not committed at all when responding to questions regarding Oranto, these responses appear to be an anomaly.

noted that Armour Energy has been difficult to work with, not only on local content matters, a factor that surely would influence respondents' ability to accurately comment on their commitment to local content.

5.6 Intermittent Involvement of International Oilfield Service Providers and Engineering, Procurement, Construction Contractors

The protracted nature of Uganda's progression towards first oil has meant that the established oilfield service companies, normally a major employer in international oil and gas, have only been involved intermittently and have, to date, only been awarded short term contracts. Oilfield service companies may seek to involve themselves throughout the project lifecycle as many of the world's largest service companies have turnkey solutions and commercial offerings from the exploration phase through to decommissioning. However, the inactivity in Uganda's industry has made it difficult for existing oilfield service providers from the exploration phase to remain in the country and for other companies, new to Uganda, to establish themselves in search of lucrative contracts during the development phase. Anecdotally, on starting this research, the Chairman and CEO of a major oilfield service company personally connected me to his staff in Uganda to take part in my study, however upon the commencement on my fieldwork, he informed me that the company had re-evaluated business objectives and could no longer participate in the research. As such, oilfield service companies have not been a permanent employer of technical staff, nor been able to permanently involve themselves in local content development. Likewise, the ongoing stalemate of the development project has created an uncertain business environment for EPC contractors who would be a major employer leading up to full operational capacity, across upstream and midstream. A senior government employee commented on the nature of effect of short-term contracts on local content development,

"Contractors, they bring onboard and interface a lot with the local workers and when they come here but they're always on timelines. So, if you don't compel them, they won't have time to train, they will just come employ a few of them in areas where they feel maybe

they can cope and then afterwards they go. We had some example here, there was a drilling companies from Poland, PGNiG. They used to come here but they would not train, we tried to push them but of course they come here, the assignment is drilling a well for maybe maximum two months, if there is another well, you move to move to another well like that and once there's no work, most of them will go. Their workers will come on the rotation”

Given the fleeting nature of these assignments and uncertainty on whether there will be future contracts, these companies have largely been unable to commit to the further development of their local employees, with the exception of the fortunate few who have been taken abroad to operational projects. As was noted by a number of respondents, the point at which the assignment ends is often the point at which additional training should start, however, this has not commonly occurred. The ongoing wait for the development project to restart has further reduced the influence of the oilfield service companies, with respondents even noticing physical manifestations of their reduced presence. A respondent noted how the uncertain business environment has influenced their in-country presence and uptake of commercial real estate,

“Given that they have like no contracts right now, even like their main offices shifted from where they used to be, from the big bases, like for Schlumberger, if you went to their previous offices, you find like that the place has been turned in like some agricultural office (the office has now been rented to another organisation, focusing on agriculture)” (26 June 2019)

This very same business uncertainty has meant that the EPC contractors, a major employer during the development stage, have not established themselves in Uganda. One operator respondent commented,

“The EPC contractors have never been on the ground and that’s one of the issues that was identified in the study. Because they’ll be the largest employers, the EPCs would be

the largest employer so one of the challenges for capacity building was them not being in place.” (19 June 2019)

Throughout the interview process, a number of respondents did note a few positive exceptions to the above trends. It was highlighted that a contractor acted diligently with regards to employing local content on their return to Uganda, seeking out locals whom they worked with in the mid-2000s and rehiring them. It was also remarked that a number of Ugandans had been taken overseas, particularly to the Middle East, where they have been able to continue their work and development. Whether these workers will one day return to work in Ugandan oil and gas is debatable, however, to many respondents, the continued employment and development of their countrymen was seen as a positive outcome.

On the whole, the lack of oilfield service companies and EPC contractors present in Uganda has reduced the influence these organisations can have on local content development in line with the contractors’ own future requirements. However, a representative from a development agency leading public sector capacity initiatives in Uganda noted that the potential EPC contractors, notably CB&I, had been willing to engage and advise on the development of local competencies,

“They were extremely helpful in both, giving us so much information about what types of job roles were required and, what types of qualifications and training would be appropriate for those people because they have experience all the way around Africa. And in many other parts of the world, they done it all before.” (11 August 2019)

Despite a number of positive comments shared by a number of respondents, it is clear that the uncertainty around the progress of the development project has prevented both international oilfield service companies and EPC contractors from establishing a permanent commitment to business in Uganda. By extension, their role in employing, educating and training local professionals has been inhibited. Sentiment from the interviews sug-

gests very little fault can be attributed these companies, as the slow progression of the industry, the uncertainty of the business climate and the reduced planning horizon cannot be considered a productive environment for these firms to engage in. Factors relating to the impact of the delayed development project and the political economy will be discussed further in Chapter 7.

5.7 Multilateral Organisations, Donor and Development Agencies - Motives, Objectives and Alignment within Institutional Theory

Whilst some people may be suspicious of the role of foreign actors in resource rich nations, as discussed throughout this thesis, institutionalist political economic theory suggests that actors are not always motivated by self-interest (Hodgson & Jiang, 2007). This research has found no evidence that donor and development agencies are pursuing objectives that are not aligned with the Ugandan government, instead, these organisations are filling a void in funding and expertise and have been a positive influence on the development of Ugandan capacity. This is in stark contrast to the theories present in classical liberalism which would assume that donor and development agencies are involving themselves in foreign economies in order to pursue their own nation's objectives, which may be in conflict with the priorities of the recipient nation itself.

In existing literature, the notion that donor and development aid is used as a vehicle to generate business opportunities for foreign contractors is most frequently levelled at the Chinese state. China, like Brazil, India, Iran, and Saudi Arabia, has now spent billions in underdeveloped nations, financing the building of roads, dams, bridges, railways, airports, seaports, and electricity grids (Dreher et. al., 2017). Like elsewhere in the world, in Uganda we can observe Chinese aid funding Chinese contractors to build Ugandan roads and other hardware. There is also a common narrative that Chinese aid provides China with “preferential access to a block of natural resources” (Brautigam et. al, 2010, p. 21) and perhaps more importantly, greater business opportunities for Chinese contractors,

Brautigam highlights that aid has allowed Chinese “contractors to sign construction contracts in Africa worth \$40 billion in 2008” (Ministry of Commerce, 2009) (Brautigam et. al, 2010, p. 21).

Conversely, there is very little literature suggesting the same motives among the ‘traditional’, DAC (Development Assistance Committee - OECD) donor community, although there are a number of academics who recognise the role of networks, and by extension donor networks, in creating market-entry opportunities in overseas countries (Holmlund & Kock, 1998; Lin & Zhang, 2005). In the context of local content development in Uganda’s oil and gas, this study found no evidence that western donor organisations had subversively opened or softened the market for non-indigenous firms.

Multilateral organisations, non-governmental organisations, development and donor agencies such as The World Bank, GIZ and DFID have become increasingly engaged in the process of developing indigenous capacity in the 21st century and Uganda has been no exception to this trend. This movement reflects an acceptance that greater international interventionism was required to correct market failures, acknowledging that prescriptions of laissez-faire economics in developing countries were not always appropriate. Feeney (1998) notes that consideration for ‘local people’ became an increasingly important part of the development aid narrative following the end of the Cold War. It was seen as a vehicle to remedy past mistakes and increase the effectiveness of major aid financed development projects; although it is more difficult to pinpoint the start of local content development as a development aid objective in oil and gas. More broadly, these organisations share the *raison d’être* of promoting development and have increasingly seen local content, across many industries, as a vehicle to achieve said objectives (Hansen et. al. 2016).

Most respondents supported the notion that multilateral development agency involvement in Uganda had been in line with published objectives and agreed remits. A respondent from a multilateral development agency made the following comments,

“I think what the World Bank is trying to do is part of the World Bank mission which, as I understand it, is partly to encourage economic and social development in the developing world. So I think what World Bank is trying to do there is wholly consistent through helping to provide people with training and development opportunities, which in itself a good thing, but also is that local content instead available for the development of the oil and gas industry that will be will be to benefit of Uganda as a whole. And by the same token, I think the same thing applies to, for example, Enabel, DFID, and all of the other organisations from multilateral organisations from different countries who can also contribute to that process”. (11 July 2019)

The data suggest that while multilateral development agencies have positively influenced the development of local content in Uganda, the extent to which is still debated; the following discussion and Chapter 6 will attempt to deliver greater micro-analysis. In contrast to the generally positive sentiment shared in the questionnaire results, there was a small body of respondents from the semi-structured interviews who questioned whether the motives of development or donor agencies in Uganda were purely altruistic. In its broadest sense, a senior representative from a donor organisation agreed with the notion that development corporations are not truly altruistic in their entirety, noting that development corporations start in the assumption that their investment is aligned with its own nation’s foreign objectives,

“Development corporations start in that assumption. All the rest is not true. Of course, they say no, but it is in relative, this always, I mean if you see the French, Germans, the British, Americans everywhere, they look indeed at it as an investment in a country and there's nothing wrong with it. The development corporation is one of the tools of foreign affairs”. (19 June 2019)

However, a small group of participants, all of whom were Ugandan, believed that multilateral development agencies are much more closely aligned to subversive goals than stated above. To this end, a former operator employee noted,

“It’s usually because you want to have your hand in the paper, because each of those organisations represents countries. So for example GIZ, you know, supporting the industry, it’s just a small window for German companies to participate. Same thing with UK or wherever”. (25 June 2019)

Other respondents were aware of the criticism of donor and development agencies but noted that there is a lack of evidence to support this notion at this stage of Uganda’s oil and gas story. One technical expert in government employment commented that he had not seen any evidence of this relationship, taking the Norwegian Agency for Development Cooperation’s (NORAD) involvement as an example. The notion that Norwegian firms may benefit from the prominent role of Norwegian development aid is considered within NORAD evaluation documents, highlighting the political risk of being seen to provide advice that could favour Norwegian firms, and that this could also damage the reputation of the companies themselves. Following an incident in Bolivia in 2006, it was noted that a ‘firewall’ was made to separate development aid from Norwegian commercial interests (Evaluation of Norway’s Oil for Development Program, 2013). The respondent noted,

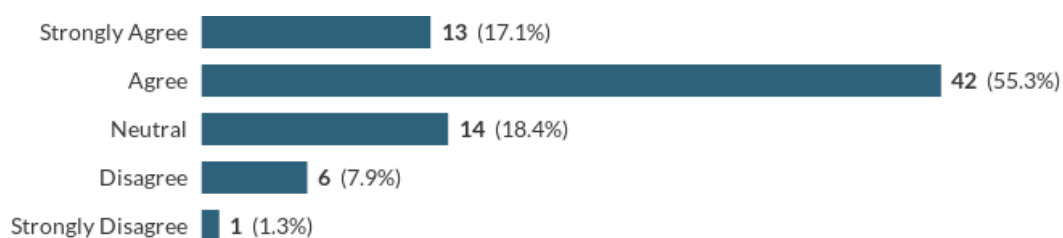
“I really don’t think because we don’t have any Norwegian companies, none. Not even a service provider. So if that was there, maybe in the long term, but if to was you would see some Norwegian company, at least a service provider or companies pursuing licenses, cause all around the licenses we have had, we tried to like influence them but they haven’t expressed interest”. (24 June 2019)

In line with the above, the majority of interview participants were appreciative of the role of the development partners in Uganda and noted no evidence that these organisations had worked to open the market to foreign contractors and suppliers. As noted by a respondent from the international development community, it is not wrong to assume that Ugandan objectives for a successful, localised oil industry, acting as a vehicle for national development, are aligned with objectives of donor foreign policy. However, more relevant questions remain, notably the effectiveness of the aid being delivered.

5.7.1 Perceptions of Multilateral Organisation and Donor, Development Agencies as a Positive Contributor to Local Content Development in Uganda

The Ugandan state's reliance on foreign aid extends beyond local content development in oil and gas. Nalugo (2012) noted that 25% of Uganda's total budget comes from foreign donors. As such, it should come as no great surprise that donors are an important player in Uganda's national development, particularly through education and SME development. Respondents delivered an almost unanimous verdict in answering question 2.11 of the first questionnaire. 72.4% of respondents either 'strongly agreed' or 'agreed' with the statement "NGOs, Development Agencies and Multilateral Organisations (e.g. The World Bank, NORAD, GIZ, DFID) have played an integral role in the development of local content and capability", whilst only 9.2% 'strongly disagreed' or 'disagreed'.

Figure 20. Questionnaire Responses



This notion that donor and development agencies have been integral players is largely supported by data from the interviews, the vast majority of whom believed that their role had been a positive one. A number of Ugandans noted the donor commitment to areas that are traditionally associated with economic participation (involving local people in the decision-making process and ownership of the industry) and not purely local content development. One explanation for this, as will be discussed in Chapter 6, is that there has been greater donor involvement in local content development in recent years and seemingly less 'sensitisation' and 'empowerment' initiatives as a decade ago. The first comment was made by a senior technical state employee,

“Some of the activities actually in to like sensitising the masses in terms of their rights, in terms of what they should they expect, in terms of what they should demand for. And I think some, they also helped that demand for a share when to come to jobs, a demand for like a share in terms of how many locals are employed” (27 June 2019)

A former operator employee concurs, noting how development aid can empower a community with skills, whilst oil companies will only invest in you if they see potential.

“For them, they (The donor / development agencies) are basically more in the community, you know, empowerment. Those ones come and empower community. But for the oil companies themselves, they empower a person that they see with the potential they will have to invest in you so that they keep you around there” (22 June 2019)

Within these comments, there is a clear impression that the involvement of multilateral organisations has been based on the premise of empowering Ugandans through local participation. However, further examples from the interview data suggests that a number of Ugandans see local content development as an extension of past attempts to represent or ‘empower’ the people. Recent examples of the projects being implemented, such as that by Enabel, GIZ and The World Bank focus on, what a number of respondents referred to as ‘empowerment’, through skilling and SME development. One operator employee noted,

“In the long run, they are empowering Ugandans to remain with their thing, to work with their oil. Cause when they train people in welding and fabrication piping and others it means, after five years, these trainees will have all the expertise to do what they’re supposed to do in the country. So the Norwegians will leave (appears to be broadly referencing western donors in general). So even if they are doing it, I think they’re doing it to ensure Ugandans gain for oil and gas” (20 June 2019)

Respondents were also keen to talk about the involvement of NORAD, although NORAD’s involvement has been strongly linked to the development of legislation, regulation and in-

stitutional capacity (NORAD, Annual Report, 2018, 2019) and not direct involvement in local content development. Participants highlighted the guidance and technical assistance of the Norwegian development agency in creating Uganda's administrative framework and local content policy. It was more commonly accepted that the area of greatest contribution to local content development is around skilling workers to work across the oil and gas value chain, along with SME development. Prior to 2015, there were a considerable number of investments and initiatives aimed at skilling Ugandans across all industries, Figure 21 highlights these investments. However, it was generally considered that more recent donor and development agency intervention has provided Ugandan institutions with greater technical guidance and physical tools to achieve the accreditation required by the oil industry.

Figure 21. Role of Partners (2015) Source: The World Bank Project Appraisal

Development partner	Budget	Nature & status of intervention
Arab Bank for Economic Development in Africa (BADEA)	US \$5 Million	Nakaseke Technical Institute
African Development Bank	US \$10.4 Million	Rehabilitation of Jinja Vocational Training Institute, Madera Technical Institute, Rukungiri Technical Institute, Dokolo, Kabasanda. In-service training through its support to Jinja VTI
Belgium (through BTC)	EUR 8 Million	Abilonino & Mulago and new project in Albertine Region scheduled for FY 15/16
European Union (EU)		Supports a large CSO support program, focusing on Skills Development
ILO		Manages a project on child labour with clear links to Skilling Uganda
Islamic Development Bank	US \$13.5 Million	Uganda Technical College Elgon, Uganda Technical College Lira, and National Teachers College Unyama
JICA		Support to Nakawa VTI & in-service instructor training

Figure 21. Role of Partners (2015) Source: The World Bank Project Appraisal

Development partner	Budget	Nature & status of intervention
Korean International Corporation Agency (KOICA)	US \$4 Million	Construction and equipment of new Technical Institute at Nakawa-Ntinda
Kuwait Fund	US \$12 Million	Tororo, Kalongo, Kibatsi, and Ahmed Seguya Memorial Technical Institutes
Netherlands (through ICCO & partners)		Support to skills training in agriculture & agribusiness Northern Uganda (ongoing since May 2013 to October 2016)
OPEC	US \$ 24 Million	Construction of nine new Technical Institutes in the districts of Namutumba, Nakasongola, Yumbe, Hoima, Lwengo, Mukono, Amuria, Kamuli, and Pader
SAUDI Fund	US \$12 Million	Construction of five new Technical Institutes in the districts of Adjumani, Bukedea, Kiboga, Lyantonde, and Kyenjojo
South-Korean Government (implemented by African Development Bank)	US \$25 Million	Kiryandongo, Iganga, Nyakatale, Mubende, and Arua Technical Institutes
World Bank	US \$ 25 Million	Support to three BTVET institutes under the Albertine Region Sustainable Development Project
World Bank	US \$ 12 Million	Support a national Hotel and Tourism Training Institute (HTTI) at Jinja under the Competitiveness and Enterprise Development Project (CEDP) (P130471).
World Bank	US \$1.5 Million	US \$1.5m grant from DFID aimed to support the Uganda Petroleum Institute Kigumba (UPIK)
IFC (The International Finance Corporation)		Financed Africa Schools Uganda program that supports over 500 private schools, with heavy emphasis on secondary and vocational/tertiary institutions, to access advisory services for improving school operations, and long-term financing for infrastructure

Whilst these investments and interventions have been numerous, the effectiveness of the donor interventions and investments have been criticised in the past. A leading figure in Uganda's private education system provided further commentary, suggesting that these involvements have not always been well calculated,

"I do not believe that all of the investments that they make abroad are necessarily well calculated strategies to help those economies grow or overcome certain challenges". (19 June 2019)

This criticism was also in evidence during an interview with a representative of a Chinese company in Uganda who was unimpressed by the broad array of Western aid and development interventions. In reflecting China's predominance in the provision of development hardware (Dreher et. al., 2017), the respondent noted the tangible results of Chinese state involvement in Uganda but criticised the effectiveness of western development aid and NGOs, broadly reflecting the Chinese reservations on traditional OECD DAC donors (Dreher et. al. 2019).

"...they come with loads and loads of money, but you know, they live in luxury places, drive the most expensive car. They put little budget for the money and then when the going back to Europe they say we did this and this and this. It's like just so sad. Even like the religions, when you go to very poor, very poor place, you see the most like the greatest, the greatest building is the church". (17 June 2019)

A number of interview respondents concurred with the previous criticisms, suggesting that much of the earlier involvement of the donor and development agencies lacked a clear strategy. It was believed that the GIZ implemented Employment for Sustainable Development in Africa (E4D/SOGA) programme has overcome previous challenges, delivering a new degree of relevancy, partially as a result of expanding the nexus of interaction between stakeholders. An international consultant commented,

“The consultations were there but to be sincere, I don't think they have involved a lot of IOCs (in reference to previous interventions). The people that have been involved, GIZ, as I said in the curriculum, now when the GIZ brought in the programme, we had the chance to interact direct to IOCs and ask them exactly what they lack, local in both, suppliers and worker and this they were able to give the gaps they were finding in Uganda and where they were lacking and GIZ took that to provoke those to see where to invest more.” (11 July 2019)

In 2010 it was claimed that there was a lack of urgency and coordination in the collective donor approach on oil and gas governance issues in Uganda (Global Witness, 2010) which resulted in numerous projects overlapping. In 2012, donor interventions were further disrupted as most EU donors suspended aid to Uganda after allegations of embezzlement by the Prime Minister's office (Van Alstine et. al. 2014). In this present study, the overall reflections on the involvement of development agencies are positive, which is supported by a broad base of factual reports and media publications on the progression of development agencies in the latter part of the 2010s (Skilling Uganda, BTVET Strategy Plan, 2012; British Council, 2019). The World Bank's funding and guidance through the Ministry of Education and Sport and the Private Sector Foundation Uganda, among other vehicles, appears to have been instrumental in delivering the required directional change in vocational education. Meanwhile, the focused nature of the GIZ programme and Enabel's work is delivering tangible results in line with operator and the wider industry's requirements. In the case of GIZ, the E4D/SOGA programme is unique in that it is supposedly delivering for the oil and gas industry at the direct result of a request of Total E&P and in consultation with the operators as well as through broader mediums such as the SafeWayRightWay coalition (a road safety initiative funded by Total, Tullow, GIZ and The World Bank). The E4D/SOGA project across East Africa is also partially funded by Tullow, further reinforcing the project's connection to oil industry objectives. A representative from a development agency commented,

“I think that program of GIZ, it will be much more direct. Cause they go to direct request from Total.” (26 June 2019)

Donor-operator coordination has been a considerable factor in the success of the E4D/SOGA project. The 2019 April quarterly report by the MEMD of GIZ's Employment and Skills for Eastern Africa (E4D/SOGA) project provided some noteworthy results. The Skills and Capacity for Organizational Productivity and Employment has trained 1,245 people in the Albertine region, with a further 191 students receiving international certifications, 200 students placed in industry placements and 415 students placed into decent jobs. Although progress was halted due to allegations of fraud in March 2019. Among other initiatives, the programme has also seen 50 welders trained to American Welders Society 2G and 4G levels as of April 2019, and a further 150 to be trained. A report of the E4D/SOGA project is included in Chapter 6.

The role of the donor community became more relevant in recent years as interventions have increasingly aligned with operator and industry requirements. Meanwhile, the notion that these development agencies are subversively softening the market for non-indigenous companies, thus far, is unfounded despite a number of respondents contending that there are ulterior motives for their involvement. Instead, Ugandan powers, in their considerably less than omniscient state, require development agencies to fill a void in expertise and funding, and therefore are playing a vital role in the development of local competencies.

5.8 Conclusion

The myriad stakeholders participating in Uganda's oil and gas industry and involving themselves in capacity development projects represents numerous opportunities to develop local content in line with industry requirements and enhance its adoption. The primary finding of this chapter is that, despite the benefits associated with operating locally, operators do not approach local content with the same degree of commitment. This lack of uniformity is very apparent when assessing the operating partners, Tullow Oil, Total E&P

and CNOOC, all of whom, display differing attitudes towards local content, although Total's request to and involvement in the E4D/SOGA project demonstrates somewhat of a change of direction with regards to its commitment to broad-based local development.

Respondents point to factors relating to the corporate makeup, size and history of the operators in explaining why local content is approached with varying degrees of commitment. In turn, explanations supported the notion that the Chinese government desires to deliver employment for Chinese nationals through CNOOC and its subsidiaries and suppliers. Meanwhile, Total E&P, as a risk-averse and sizeable IOC, demonstrated preference for an established international supply chain as well as rigid procedure for recruiting and onboarding staff. This, in turn was very much in contrast with Tullow Oil, a modestly sized company focusing on prospects on the African continent, and Oranto Petroleum, an African operator, with a positive attitude towards local employment and procurement. To many respondents, Tullow Oil's farmdown and departure from the industry represents a considerable loss to Uganda's localisation objectives, particularly as the remaining operating partners have demonstrated, to varying degrees, that local content does not reflect the core principles of their business models. Meanwhile, the entry of Oranto Petroleum into the industry goes further to highlight the shortfalls of the operating partners as the company has achieved, albeit on a small scale, a degree of localisation seemingly inconceivable to Total E&P and CNOOC in Uganda.

This study found that development agencies are considered to be an important player in upskilling Ugandans, notably the GIZ E4D/SOGA project, The World Bank project and that of Enabel. As explored further in Chapter 6 and 7, donor interventions have proved useful as the market itself has failed to develop and deliver requisite competencies, both human and supplier; spontaneous order has indeed been insufficient. The data show little evidence that development agencies are softening the market for non-indigenous suppliers through their interventions in local content development in Uganda or that they are subversively representing foreign business. For example, respondents noted little evidence that Norwegian companies were interested in the industry despite NORAD's considerable in-

volvement in the development of the regulatory framework and other aspect of local content. Instead, respondents believed that approved suppliers more commonly reflect the nationalities of the operating companies. As such, the data suggest that multilateral development agencies have filled a void in expertise and funding and resultantly have been a vitally important player in moving towards localisation objectives.

Whilst foreign governments have had a positive impact on local content development, this chapter demonstrates one of the ways in which Ugandan state policy is hindering local content development and adoption; the data demonstrated that Ugandan management of the sector has engendered an uncertain business environment which has had a profound effect on local employment, contracting and capacity development. This is notably impacting the feasibility and willingness of EPC contractors and oilfield service companies to apply themselves to long term local content development strategies, as well as short term in-country employment. The breakdown of the farmdown agreement between Tullow Oil and the other operating partners due to tax disputes with the government in August 2019 did not bode well for an improved business environment for the major contracting firms; however, as of August 2020, it does look like a sale is near to being agreed.

This research also allows us to understand the obstacles to the adoption and progression of local content and its development in Uganda. Whilst this chapter provides us with details of the objectives and roles that these international stakeholders are playing in the development of local content, the following chapter will observe trends and assess the extent to which external factors influence adoption and interventions. More precisely, Chapter 6 will explore how fluctuations in the oil price and other factors have influenced the trajectory of local content in Uganda and whether operating companies have changed their business model as a result of the price shock of the 2014 crash and the resulting increased relevance of donor interventions.

Chapter 6: Impacts of the Oil Price Crash on International Stakeholder Commitments to Local Content in Uganda

This chapter investigates how the oil price crash in 2014/2015 impacted and continue to impact upon local capacity development by non-indigenous actors and operator adoption of local content. The data obtained in this research, coupled with published data, reject the hypothesis that operators have become substantially more localised since the oil price crash; instead, we can observe incremental movements towards a more localised industry. My research indicates that following the oil price crash operators adopted a short-term cost reduction strategy which involved greatly reducing expatriate staffing and a significant reduction in local content development spending. In the longer run we observe greater job role localisation, as many Ugandans have taken on roles previously occupied by expatriates, as well as the nearshoring (localising) of maintenance level contracts and the increasing involvement of operators in broad-based local content development initiatives, often led and funded by donor / development agencies.

Whilst it is not linked (directly for certain) to the falling oil price, this chapter argues that donor and development agencies have taken an integral role in the development of local capacity for the oil and gas industry in Uganda, filling a void in funding and technical expertise left by operators as well as the Ugandan government. In this chapter I show that donor contributions to broad-based local content development, such as World Bank projects to upgrade Ugandan vocational institutions to deliver accredited skills for the oil industry, have become increasingly important in actualising the goal of increasing local content adoption.

6.1 Introduction

For many people working in and observing the oil and gas industry, the 2014 oil price crash represented a turning point, particularly with regards to local content. As we can observe from Figure 22, there was a substantial drop in the price of Brent Crude (along with all other Benchmark Crudes) from June 2014 to a nadir in early 2016; the fall over these

20 months was 75.8% from USD 115.19 to USD 27.88. If revenues from the sale of crude products and by extension refined products were going to remain at levels half of that previously experienced, it was clear that the business model of the operating community would have to adjust in order to internalise the new market prices. A frequently proffered narrative in the industry at the time (Andrews et. al. 2016) reflected the need for operators to adopt more cost-effective models of operation, particularly in less mature or frontier hydrocarbon markets. For many people this meant 'localisation', employing a greater proportion of local people and procuring from a more economically viable local supply chain rather than continuing to contract established suppliers from elsewhere in the world, often referred to as nearshoring. The notion that operators may all be working towards a more localised industry reflects the concept of isomorphism (DiMaggio & Powell, 1983), which is present in institutionalist theory, as external pressures engender the adoption of similar business practices.

Figure 22: Spot Price of Brent Crude Between 2011 and 2016 (Macrotrends)



Prior to commencing this study, my experience in the oil and gas industry, globally, was the catalyst for testing what appeared to be a valid hypothesis; namely, are oil and gas operators in Uganda becoming more localised in the wake of the 2014 oil price crash? Whilst there were partial corrections in 2016 and the years following, driven not so much by sup-

ply and demand but threats of sanctions and conflict in the Middle East, Brent Crude averaged 38.23% below the June 2014 spot price in the years 2016-2019, before falling further in 2020. It can be deduced from the data that lower oil prices exert two main pressures on operators, firstly in reference to lower operator revenues but, secondly, increased pressure from the Ugandan government as future fiscal linkages are reduced and the need to develop backward linkages increased. The data obtained in this study reinforces the notion that the oil price crash has intensified the need to develop local competences in line with operator requirements and that operating more locally has greater cost efficiencies. In turn, the study's findings infer that the external pressures related to lower oil prices have not been enough to engender the abandonment of the conflicting objectives discussed in Chapter 5, such as CNOOC's mandate to deliver jobs and business for Chinese people and companies. Resultantly, we can observe incremental movements towards a more localised industry in Uganda.

Firstly, this chapter explores the cost-efficiencies of operating locally, drawing from existing literature but also reflecting on the opinions and perspectives obtained in this research. Pegram's (2018) Ghana study highlighted the cost-effective nature of adopting a localised business model, and this notion was reinforced by this study's respondents who contended that operating with a more localised approach represents a more cost-efficient business model in Uganda. It was noted that Ugandans are likely to have lower salary demands than their international counterparts and that local suppliers are also likely to represent a more cost-effective procurement option, thereby allowing operators to reduce project expenditure on employment and contracting.

An important feature of this research, as explored in this chapter, is the growing relevancy of donor and development agency interventions in developing Ugandan content for the oil and gas industry. The data infer that, whilst the oil price crash saw operators reduce their spending on local content development, it has engendered greater cooperation between stakeholders, notably around the development of future capacity and primarily around donor interventions. Beyond cooperation, we can also observe that the trend in development

interventions is favouring the development of employable skills and responds to the industry's requirement for good technical capabilities within the workforce. Whilst many donor interventions are ongoing, the increasing emphasis on accreditation within capacity development and stakeholder cooperation is already responsible for delivering improved development outcomes for Uganda's oil and gas industry.

With regards to the operator community, in taking into account the cost considerations of a more localised business model, this chapter assesses the impact of the oil price crash on operator employment, procurement and local content development. However, the chapter only addresses the operating partners, CNOOC, Total and Tullow, as Oranto Petroleum and Armour Energy only began exploration in Uganda after the oil price crash. Oranto and Armour Energy remain minor industry players and correspondingly, are unlikely to induce any form of mimetic isomorphism. This analysis looks to isolate the impact of the oil price crash in light of the non-responsiveness of the government to field development plans and the introduction of the National Content Regulation. In doing so, this chapter references a plethora of data, notably that published by the PAU and OAG, provided by the PAU, multi-lateral development organisations, interview data and survey data. This broad spectrum of data has allowed for in-depth analysis of the trajectory of local content and its development in Uganda.

This chapter primarily addresses my first research question. The question asks whether oil companies are operating differently to what was deemed to exist in the previous paradigm of non-compliance, discussed in the literature review, and seeks to understand whether there is a reason for this difference. This chapter delivers insights on the extent to which operators are moving away from non-compliance, exploring differences between companies, and assesses the oil price crash as the aforementioned reason for the changing models. Question 2, concerning the roles of stakeholders in development and adopting local content, is also addressed later in this chapter as I further explore the important role being adopted by the donor community to create and enhance indigenous capacity.

6.2 The Cost Considerations of Localisation

In this study, the vast majority of respondents contended that localisation brings benefits to operators, international oil-field service companies, EPC contractors and the nation alike. In the case of operators, an approach that favours Ugandan labour, contractors and suppliers was deemed to be a more cost-efficient way of operating. More generally, literature supports the notion that utilising local capacity is a more cost-efficient business model. Andrews & Playfoot (2015) and Pegram (2018) emphasise the benefits of a localised workforce, whilst, a number of academics, including Pegram, also contend that job role localisation in certain, very specialised positions, can be a more costly procedure than retaining an expatriate (Pegram, 2018; Pegram et. al., 2018).

6.2.1 The Cost Considerations of Workforce Localisation

Authors such as Dickmann et al. (2017), Fayol-Song (2013), Hickey (2017), Kobrin (1988) and Speers & Henchy (2016) have highlighted that job role localisation can reduce operator costs. These academics note that in addition to salary demands, expatriate labour can require further compensation such as housing, private drivers, medical cover, travel, schooling for children and security; all of which are consistent with the requirements of expatriate labour in Uganda. However, beyond oil and gas, there is a greater body of literature on localisation, in which authors note that expatriate labour can both be cheaper and more expensive than indigenous labour, depending on level of development and the nature of the local labour market. For example, Forstenlechner (2008), Mellahi (2007) and Rees et al., (2007) discuss Emiratisation in the UAE, noting both the cost of upskilling Emirati labour, the cultural challenges around Emirati employment, but also, in a number of cases, higher salary demands than their expatriate counterparts. Emiratisation itself has been requiring of substantial government intervention in order to overcome challenges in the labour market, encouraging nationals to take up roles previously occupied by expatriates, primarily in finance and the oil and gas industry (Al-Qubaisi, 2012).

The context of Uganda's national development and its largely informal, imperfectly aligned and poorly remunerated labour market (Danish Trade Union Development Agency, 2019)

suggests that Ugandan labour commands lower salaries than those from the UK, France, China or other nations with substantial human capacity in oil and gas. The data obtained in this research reinforces this notion, with respondents frequently highlighting the benefits of employing Ugandans instead of expatriates, noting primarily the comparatively low salary demands of Ugandan employees and, to a lesser extent, the value of recruiting individuals with local knowledge and language skills. A government representative agreed with the premise, commenting on the collective interest in employing locals to save costs,

“We see also the oil companies, both international oil companies and the national oil companies, they do have interests because here it makes sense. If you really can afford to employ locals, the cost of doing business really goes down because you assumed that the way how you pay expatriates is not the same way you should pay in locals.” (27 June 2019)

The broad sentiments expressed throughout this interview process reflects the data collected in the first questionnaire. Only 4% of respondents ‘strongly disagreed’ or ‘disagreed’ with the statement “Employing nationals and procuring from local suppliers represents a cost-efficient way of operating in Uganda”, whilst 88% ‘strongly agreed’ or ‘agreed’. Although not a perfect science, as different positions demand different salaries, salary data from 2014 also infer that a more localised operator can reduce employment costs. Below (Figure 23) we can observe that the operator with the most localised workforce, Tullow, benefits from the lowest salary per employee, whilst maintaining a higher average salary for Ugandan nationals.

Figure 23: Operator Average Salaries by Employee, 2014 (OAG Report, 2015 – author’s calculation)

Operator	% Local Workforce	Average Salary	Average Salary of Nationals	Average Salary of Expatriates
CNOOC	71%	14,794,238.71	3,641,708.87	41,746,185.83
Total E&P	77%	16,555,406.64	5,125,207.15	55,357,925.97

Tullow	94%	13,115,483.37	11,622,560.49	38,121,941.62
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Interview participants noted that the salary differences are exacerbated in well-remunerated management positions which, particularly within Total and CNOOC, are largely occupied by non-Ugandans. However, localising these roles requires time and the substantial investment by employers. Pegram (2018), in his study on job role localisation in Ghana, highlights that the investment required in achieving local competence in some roles, primarily advanced and specialised roles such as ‘Exploration Manager’ is greater than the cost of continued expatriate employment. Pegram also notes considerations of risk, in that if a company invests in the ongoing training of an employee, there is no guarantee that this employee will remain at the company; the author writes, “certain roles may be deemed too high risk to localise by an O&G company, and others require significantly more investment in education, training and development” (Pegram, 2018, p. 176). The notion that planned job role localisation is not always cost-effective is supported by a number of respondents in this study, a representative of an association of academic and vocational institutions commented,

“It is more costly for the operator to raise the local capacity than hire a few specialists from abroad or automate. You would rather employ machines to be more profitable. Or if that’s not an option, employ an international expert for that job rather than taking the path of raising local capacity,”
(...)

“Now then, for the less specialised jobs. I think that’s where we can now speak in terms of raising local capacity. And there is potentially saving on the side of the investor to make because the labour is abandoned. It is available and it is trainable.” (18 June 2019)

Apart from a number of very specialist roles, the data infer that workforce localisation should represent a business objective to a cost-conscious operator community and this is broadly reinforced by the aggregated salary data. Although, as discussed in Chapter 5, not all business objectives are linked purely to cost.

6.2.2 The Cost Considerations of Nearshoring

Unfortunately, there is no metric for assessing whether local suppliers are more cost-efficient than their international counterparts as there is no guarantee that local companies can compete on price and local suppliers may have offerings that differ in quality from the international competitors. In some countries, the UAE included, it is very possible that a local supplier may not be able to compete on price with international suppliers, perhaps most notably from the Indian subcontinent. However, in Uganda, given the relatively low cost of labour and many raw materials, respondents were confident that local suppliers often represent a more cost-efficient option than their international competitors. It is also important to remember that there may be benefits beyond a lower contract price. Steckel et. al. (2004) among other academics, propose a number of commonly occurring benefits of a localised or shorter supply chain, including reduced inventory costs, lower logistics costs, lower duties, taxes and faster response times as well as shelter from exchange rate fluctuations. Assuming that local companies meet industry standards, respondents believed that it would be in the interest of the operators to favour local suppliers.

6.2.3 The Challenges and Cost-Considerations of Succession Planning and Operator-led Local Content Development

As noted earlier and explored by Pegram (2018), there is a substantial financial risk when operators undertake succession planning and invest in education and training. Both broad-based local content development and operator staff training can present challenges, despite the latter being tax recoverable against future earnings. Funding for education and training is likely to be ineffective unless the academic and vocational capacity is present to provide students with the requisite skills and certifications. In turn, this explains why most scholarships between 2010-2014 involved sending students to Europe or Australia to further their studies or to Trinidad and Tobago for certifications and on-the-job experience. With regards to broad-based local content development, an area in which there has traditionally been little input from operators and also beyond recoverable spending, any investment will need to be accompanied by the knowledge that realistic outcomes will benefit the business. This, once again, is reliant on academic and vocational capacity, as well as the competence of the project implementors, to ensure that the investment returns tangible benefits such as the creation of a highly competent local supply chain.

Succession planning and future staff development requires a degree of commitment from the employee or future employee in order to minimise risks for both sides. In the case of scholarships, even if the courses selected for the students are aligned with industry requirements, operators may wish to take precautions to ensure that the company benefits from the investment; this is why Total signed pre-employment contracts with the students that were selected for scholarships. On the other hand, Tullow did not offer pre-employment contracts, but the company provided many more scholarships which widens the talent pool and acknowledges a degree of attrition. Whilst the end goal might be a fully capable local employee, who is cheaper than an expatriate, with fewer maintenance expenses and can enhance community relations, the process of reaching this objective is not always straightforward. Operating spending on its own staff development is tax recoverable, but there is an opportunity cost, notably the time away from their daily duties and the risk that the individuals trained will seek to move to another company; for example, an operator employee interviewed expressed their desire to work for an oilfield service provider having been educated abroad and trained by the operator.

6.3 Isolating the Impact of the Oil Price Crash on Local Content and its Development

In order to assess the impact of the oil price crash, it is necessary to be aware of other supplementary pressures on local content development and its adoption in Uganda. Most notable of these supplementary external pressures is that the fall in the oil price coincided with the non-approval and subsequent delay of the field development project, which has resulted in a substantial reduction in industry activity. The introduction of the National Content Regulation (2016) was also considered to have positively impacted local content adoption by one government respondent, reflecting a form of coercive isomorphism; although this was rejected by the majority of respondents. Despite most respondents dismissing the impact of the National Content Regulation, it is important to recognise its im-

plementation and intended objective. These supplementary pressures on local content, albeit one which has been largely dismissed, will be discussed in this section, allowing us to better isolate and comprehend the impact of the oil price crash.

6.3.1 The Delayed Development Project

The impact of the delayed development project has been simply to reduce industry activity, reaching a non-operational or maintenance state in recent years. Employees and former employees of Tullow noted that the first field development plan was submitted in early 2013, predating the collapse of the oil price by at least 9 -12 months. The approval of such plans is considered to be a process by which there are a number of reviews, comments and document iterations and may take a few years. Resultantly, there was debate among respondents as to whether the oil price crash further delayed the approval of the development project; although, it is also reportedly an issue of taxation in which Museveni refused to give any concessions to aid Tullow's farmdown. In 2016 Uganda appeared to be progressing towards first oil, as the awarding of production licences to Tullow, Total and CNOOC signified, to many observers, that the development project would gain approval in the foreseeable future. However, as discussed throughout this thesis, no field development plan has been approved during this research, as such it is now approaching a decade since the first development plan was proposed without a positive response from the Ugandan government. As such, respondents frequently noted the lack of certainty around the future of the development project as being a major impactor on local content and its development.

Throughout the interviews, respondents noted both the effect of the oil price crash and the delayed development project in equal measure as being major influencers on the development of Uganda's oil industry as a whole. The data infer that these two external pressures did not engender the same response from the operators with regards to local content, although both engendered a form of isomorphism. Respondents firstly note that overall staffing numbers decreased significantly following the oil price crash but have gradually been reduced further in light of there being less work to be done; in 2013, the three main operating partners collectively employed 546 people, 67.7% of whom were Ugandan nationals

(Figure 12). By 2018, the overall number of people employed by all operators had fallen to 168, of which 77% were Ugandan (Data provided by PAU). The data show that expatriate staffing, as a percentage, fell greater than that of nationals. This overall fall in staffing numbers is attributed to the lack of industry activity. One former operator employee commented,

“It (the government) badly delayed the approval and that effected operators because they couldn’t have manpower and they can’t keep on paying guys who weren’t working” (28 June 2019)

Secondly, respondents noted that the total value of contracts being awarded by operators has fallen substantially due to the dearth in operator requirements. In 2013, USD 392,893,665 was procured and contracted by the operators to both Ugandan and foreign suppliers (OAG Report, 2015), but in 2019, this figure was less than USD 20,000,000, representing a 94.91% decrease (Data provided by PAU, 2019).

The lack of operations and uncertain business environment caused by the delay has also influenced local content development. Local content development spending was USD 439,962 as highlighted in 2019 PAU data (although no information is provided to clarify whether this is just operator staff development or broader LCD spending), which is a very small proportion of the 2013 figures provided in the OAG; in 2013, local content development spending on operator staff alone was USD 2,477,475, representing an 82.24% decrease. Respondents noted local content development spending has been negatively impacted as faith in the timely commencement of the development and production phases decreased. One operator employee noted how the delayed development project has influenced business confidence to invest in local content and its development,

“The operators are very sceptical to go ahead and proceed with works like they did before. (...) so now they will not do any until the final investment decision is made, they cannot fully invest right now”. (20 June 2019)

The data obtained infer that the delayed development project has engendered inactivity and uncertainty in Uganda's oil industry, which in turn has brought about a reduction in operations in Uganda. Consequently, this has caused employment, procurement and spending on local content development to decrease, vastly reducing the net benefits to the Ugandan economy.

6.3.2 Local Content Legislation and Regulation

The second supplementary pressure on local content, proposed by a respondent, is the introduction of new regulation and legislation (the National Content Regulations 2016 were consolidated in 2020 by the National Local Content Bill). This study does not believe that new legislation and regulation itself has been influential in delivering greater localisation, or to note institutionalist theory, engender coercive isomorphism; although respondents did infer that greater pressure from the government is a positively influencing factor (discussed further in 7.4). Despite being dismissed by most participants, I do believe it is important to note that the government did attempt to use regulation and legislation during the study period to enhance local content development and adoption.

Whilst one government respondent pointed to the importance of the new regulations, the National Content Regulations of 2016, an interventionist tool to actualise local content objectives, most interview participants were very dismissive of its impact. It was noted that operators have been mandated in one form or another to deliver on local content obligations and the introduction of regulation has not changed that, largely due to implementation and monitoring challenges. On the 22nd May 2020, the Uganda parliament finally passed the National Local Content Bill which will further regulate the industry, although its impact has not been investigated in this study.

The data obtained in this research infer that operators have demonstrated a willingness to find loopholes within the laws and regulations or adopt local content on their own terms, whilst the government appears to be struggling to establish an effective framework for monitoring and implementing its governance over the sector. Regardless of the form of mandating, implementation and enforcing continues to represent a major challenge, and as such,

the effectiveness of regulation has been limited. The OAG report even notes government failure to follow up with operators to understand why proposed local content spends were not actualised following the submission of annual reports, as mandated in their licencing agreements (OAG Report, 2015). Early research (Lay & Minio-Paluello, 2010), suggested that licencing agreements failed to set any specific timetable or quota targets, simply that the licensee will gradually replace its expatriate staff. In this study, a number of comments were made which highlight the ineffectiveness of the laws and regulations, particularly around the employment of nationals; interview participants noted that operators have even manipulated their own nationalisation plan which they present to the government, a government employee noted,

“Because there’s nationalise plan, as I told you, they never implemented it so they just keep changing it and rotate somebody, if he (a non-national) has been here for 5 years, they change the title and change him to another title. We don’t seem to be on the same page” (28 June 2019)

Other respondents were keen to note the ease by which operators can circumvent the contractual clauses and the new regulations; a former operator employee noted,

“So you have a report that say to we’ve done the interview process, all the people that we’ve got, including the one who used to do this job, by the way, of course, that’s not indicated, are not qualified, this is the basis of why we would need a work permit for ‘person x’ for three years. So you understand the dynamics” (21 June 2019)

Whilst it was considered that local content regulation has been ineffective since its enshrinement in 2016, there is little hard data to support this due to the lull in operator activity. Data from 2017 (the year following the introduction of the National Content Regulations) show Total’s proportion of procurement contracted to local suppliers falling back to 2013 levels, although this shouldn’t be read into too much as project demands vary according to the lifecycle, which, in turn can explain slight variations in procurement from year to year when the industry is operational. The utilisation of loopholes in local content regulation and contractual clauses by the operating partners, particularly in employment, have undoubtedly

undermined the localisation objectives of the state. Most importantly however, it was contended that the lack of implementation and monitoring has compromised the effectiveness of the new regulation.

Figure 24. Summary of Regulations with Local Content Provisions (Author's Work)

Petroleum Exploration, Development and Production Act, 2013 (henceforth PEDP Act)
Petroleum Refining, Conversion, Transmission and Midstream Storage Act, 2013 (henceforth PRCTMS Act)
Petroleum Exploration, Development and Production Regulations, 2016
Petroleum Exploration, Development and Production National Content Regulations 2016
Petroleum Refining, Conversion, Transmission and Midstream Storage Regulations 2016
Petroleum Refining, Conversion, Transmission and Midstream Storage National Content Regulations, 2016
National Local Content Bill, 2020
<i>These regulations are augmented through binding provisions incorporated within production sharing agreements (PSAs) with licensed operators. These contractual clauses provide for the training and employment of suitably qualified Ugandans, in addition to the payment of annual training fees to the government ActionAid (2017). As noted in Chapter 4, recent PSAs with operators have not been made available publicly.</i>

6.4 The Adoption of a More Localised Approach to Oil and Gas Operations in the Context of Lower Oil Prices

The data collected through the questionnaires and interviews suggest that there has not been a wholesale adoption of a new, localised, operating model. Instead, there has been some incremental movement towards a more localised industry, with interview data suggesting that CNOOC have been less willing to localise than the other operating partners. In exploring whether a more localised operating model has been adopted, this study

looked at operator commitments to three central components of local content: employment, local procurement and the development of local capacity (both human and enterprise). Collectively these indicators are a marker for the progression towards a more localised oil industry in Uganda. This research acquired data on local content figures from the PAU and utilised published data; these figures were compared against and analysed alongside questionnaire and interview data.

Percentage-based data provide some positive signs that local content has and is progressing, although this data bely falling net contributions to the Ugandan economy caused by the delay of the development project. A number of presentations and press releases from the GoU focus on the positive aspects of the data, primarily the proportional growth between certain years; one conference bulletin from the PAU notes “Through continuous and dedicated regulation, the sector has seen a growth in percentage contract value spent with Ugandan companies from 17% in 2009 to 36% in 2016” (Petroleum Authority Uganda, National Content Conference 2019, Bulletin p. 55). This growth can be observed in Figure 25, but the same graph also shows local content falling from 2014 to 2017. Only one interview participant reinforced the notion of substantial progress, highlighting regulatory developments as the primary reason but also the falling oil price. The respondent, from the Ugandan government, noted,

“Here it is a win-win situation. So all of this has contributed to the increase. So from that period of time, 2014, we have seen an increase in local content and employment of Ugandans.” (25 June 2019)

It is important to note that other respondents working for the GoU did not share the same opinion. The impact, as I discuss presently, can largely be defined as short-term and medium to long-term. Short-term impacts are a business reaction to the price collapse, whilst longer-term effects are a response to a shared realisation that oil revenues are likely to be less than originally anticipated. In turn this realisation that revenues are less in both the short and long run is incentivising more cost-efficient operating and has been furthered by

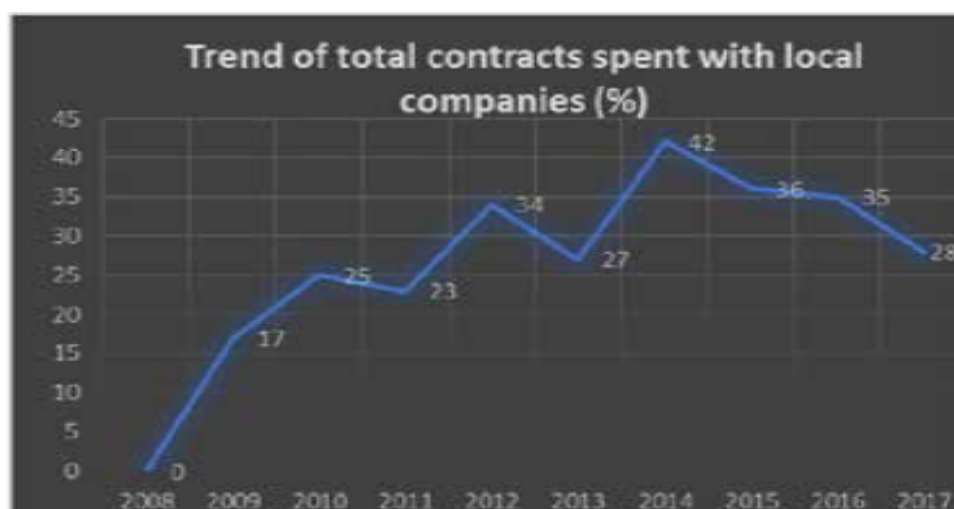
heightened pressure from the indigenous communities and the government to enhance non-fiscal linkages.

6.4.1 Effect of the Oil Price Crash on Operator Local Procurement

This research assumes that if operators had adopted a more localised business model, we would have seen substantial growth in the percentage of contracts awarded to local companies, along with the other, previously noted, components of local content. Although data published and data provided by the Petroleum Authority of Uganda (PAU) for this study underline a broadly positive narrative, a detailed look at the data reveals that there is no smooth progression. As a result of the significant fluctuations and unexplained changes in local procurement, it is difficult to conclude if any significant relationship between lower oil prices and procurement processes.

The data published in the PAU publication highlight that between 2009 and 2016, the percentage of contract value spent with Ugandan companies actually peaked in 2014 at 42% (impressive considering Ovadia (2013) estimated Nigeria only achieved around 40% in 2012 / 2013) and fell as low as 28% in 2017, the last year recorded in the publication. Data provided by the PAU for this study reinforce the lack of a smooth upward trend, showing local procurement returning to 33% in 2018 before reaching 76% in 2019. Figure

Figure 25. Trend of Total Contracts (Petroleum Authority Uganda, National Content Conference 2019, Bulletin)



25, taken from a PAU publication, highlights the absence of a smooth growth curve and more importantly shows local procurement as a total percentage of overall procurement falling year on year between 2013 and 2017. Finally, we can observe a substantial correction in 2019, seeing local procurement as a total percentage of overall procurement double from 2018 figures (Figure 28), although the precise catalyst for this appears slightly unclear.

Figure 26. Operator Spending on Local Goods and Services between 2010 – 2013 (OAG Report, 2015)

Company	Category of Suppliers	2010 (USD)	2011 (USD)	2012 (USD)	2013 (USD)	TOTAL (USD)
TUOP	Ugandan	32,780,318	62,168,449	67,842,261	23,530,000	186,321,028
	International, registered in Uganda ¹	-	-	-	54,560,000	54,560,000
	International	99,171,458	203,439,576	139,974,188	8,300,000	450,885,222
	Total	131,951,776	265,608,025	207,816,449	86,390,000	691,766,250
	% Ugandan	25%	23%	33%	27%	27%
TEP	Ugandan	N/A	N/A	38,800,000	71,040,000	109,840,000
	International, registered in Uganda	N/A	N/A	61,500,000	182,500,000	244,000,000
	International	N/A	N/A	8,000,000	14,600,000	22,600,000
	Total	N/A	N/A	108,300,000	268,140,000	376,440,000
	% Ugandan	N/A	N/A	36%	26%	29%
CNOOC	Ugandan	N/A	N/A	21,859,831	11,869,118	33,728,949
	International, registered in Uganda	N/A	N/A	7,525,590	-	7,525,590
	International	N/A	N/A	35,870,169	26,494,547	62,364,716
	Total	N/A	N/A	65,255,590	38,363,665	103,619,255
	% Ugandan	N/A	N/A	34%	31%	33%
Total amount spent		131,951,776	265,608,025	381,372,039	392,893,665	1,171,825,505
Total paid to Ugandan Suppliers		32,780,318	62,168,449	128,502,092	106,439,118	329,889,977

Source: OAG Analysis of Oil companies' procurement data

Figure 27. Procurement Data for 2017, Petroleum Authority Uganda, National Content Conference 2019, Bulletin

	Total	Ugandan	Non Uganda	%age Local
Total	124,562,000	31,844,000	92,718,000	26
CNOOC	6,603,375	2,569,607	4,033,768	39
Tullow	2,671,008	2,562,413	108,595	96
over all	133,836,383	36,976,020	96,860,363	28

N.B. The above table provides procurement data from 2017. During the year 2017, a total of USD 133m was spent on procurement contracts, purchase orders and call offs, 28% of which went to Ugandan companies as shown in the table.

Figure 28. Procurement Data for 2018 and 2019, Provided by Petroleum Authority Uganda

Contracts awarded to local businesses by year (percentage or actual numbers)	Year	USD	Percentage (%) of overall procurements
	2018	14,364,196	33
	2019	13,282,954	76

Respondents expressed sentiments which were largely consistent with the above data, noting the falling procurement since the oil price crash and little proportional movement towards a more localised industry until 2019. There was only one exception to the above, as the aforementioned government representative provided an account contrary to all other respondents and in stark contrast to the data provided by the PAU. The respondent commented,

“Here in Uganda there was, we could see companies buy in, for example, local goods and services, I can tell you until 2017 or 2018. I think the company spent about three point... over three billion US dollars just in local content (this is not corroborated by official data), just buying local goods and services. And this has been, this is the highest so far because we have been going up at a steady scale” (25 June 2019)

In interpreting the data known to them, interview participants contend that the industry's inconsistent demand for goods and services has also made it more difficult to understand whether operators are adopting localised procurement models or whether existing preference for established and risk-free supply chains remain. It was noted that the depressed level of procurement also means that local procurement as a proportion of total procurement can be distorted by a single substantial contract. Conventional knowledge suggests that when operations are at their lowest ebb, demand for more technologically advanced services, usually beyond the capabilities of local service providers in nascent hydrocarbon economies, are lower, meaning proportional spending with local suppliers is greater, broadly speaking this has been the case in Uganda. The notion that nascent, indigenous sectors in any international industry struggle to compete for technologically complex tenders is well evidenced in literature (Hong and Snell, 2015; Khan and Nicholson, 2015) but has also been observed in oil and gas, "the use of specialised inputs and the technological complexity of the petroleum sector often limit the possibility of developing backward and forward links into the local economy. An economy that is very limited can hardly be expected to quickly supply services (let alone build forward links)" (Tordo et. al. 2013, p. 6).

In the period since the oil price crash, we can observe Tullow adopting a very localised procurement position. The prolonged sale of Tullow's Ugandan operations has coincided with a substantial reduction in Tullow's procurement in the absence of operational activity, this can be observed in Figure 27. Whilst interview respondents contended that Tullow procured more readily from local suppliers, this was not reinforced by the OAG data in Figure 26 which provided data from 2010-2013. However, as we can observe from Figure 27, Tullow has moved to a very localised procurement position by 2017 (96%), seemingly reflecting the company's willingness to favour local suppliers, but also, a movement to a more cost-efficient procurement model. It can be hypothesised that this movement towards localised procurement reflects the pressure to reduce costs associated with the oil price crash and taking advantage of the goods and services available in the local economy during an operational period characterised by reduced technologically advanced inputs.

Until 2019, the data provide little evidence that Total and CNOOC have sought to utilise local suppliers more. We can see from Figure 26 and 27 that Total's local procurement was lower in 2017 than 2013, whilst CNOOC's local spend has grown as a proportion but fallen hugely as an overall figure. The general consensus from this study's participants was that they were unsure whether Total and CNOOC had become more willing to consider local suppliers, even in areas where it is perceived that local capabilities are present. As discussed in Chapter 5 respondents noted that existing, indigenous service providers were not being utilised by Total or CNOOC, notably the example of Mineral Services Limited. As such, the evidence suggests that the pressures associated with a lower oil price have not been substantial enough to engender the adoption of shorter, more localised and more cost-effective supply chain.

Data from 2019 deliver an interesting contrast, whilst overall procurement only falls slightly from 2018, the local share of procurement more than doubles to 76%. A Total E&P representative noted that in the absence of considerable activity, the industry has been able to put time and effort into the localisation of procurement, noting that "theory has been turned into practice" and that "the IOCs sought alignment with the government", seemingly as a result of increased government pressure. It was agreed that the lack of specialised inputs has been the factor that allowed the proportional spend to increase to 76%, meaning that contracts such as security services, catering services, transportation or administrative services may have been localised whilst demand for foreign services has decreased. The movement to localise these contracts must still be viewed as a positive development.

The developments that have been made in localising procurement, seemingly at a maintenance level, are important developments, although, it does not reflect a substantial shift in operator procurement, simply the nearshoring of a number of smaller contracts. Given the time that has passed since the oil price crash, the data infer that the transition from 2018 to 2019 represents Total and CNOOC attempting to align with government expectations, rather than a movement engendered by cost-considerations; reflecting the notion that the lower oil prices have heightened government demand for local content. However, it does

not necessarily mean that the conflicting objectives, CNOOC's mandate to contract Chinese companies and Total's preference for an established and proven international supply chain, have been abandoned as local suppliers are likely to lose out to established international suppliers and Chinese service companies when the development project restarts and major contracts are tendered. As noted by the aforementioned Total representative, local procurement will once again drop below 40% when the project resumes as it is expected that the most valuable contracts will go to foreign companies.

An unfortunate reality of this study is that the nature of the industry, notably its inconsistent requirement for inputs and procurement, makes it difficult to observe trends in procurement. Resultantly, in the context of lower oil prices, the only observation that can be made with regards to procurement is an incremental movement towards a more localised industry in 2019, characterised by the nearshoring of small, maintenance level, contracts. Rather than a reaction to cost-related pressures, this seemingly reflects the increased importance of local content to the Government of Uganda and correspondingly greater pressure on the operators.

6.4.2 Effect of the Oil Price Crash on Local Employment

Employment has fallen across all operating companies in Uganda since 2013/2014, with the exception of new companies, Oranto Petroleum and Armour Energy, although the proportion of Ugandans employed in the workforce has increased. The hard data coupled with interview data infer two main impacts of the oil price crash on local employment; the first being an immediate fall in the number of expatriates following the oil price crash, the second being a steady increase in the proportion of Ugandans in the operator workforce.

As we can observe from Figure 29, prior to the oil price crash, in December 2013, CNOOC employed 78 Ugandan nationals (representing 68% of their workforce), Total E&P employed 123 Ugandan nationals (representing 57% of their workforce) and Tullow Oil employed 169 Ugandan nationals (representing 93% of their workforce) (OAG analysts

of National Content Report from oil companies for 2012-2014). Collectively in 2013, Ugandan nationals accounted for 67.7% of the workforce among the three main operating partners¹¹.

Figure 29. Operator Employment 2012-2014 (OAG Report, 2015)

Oil Company	Total number of employees			Nationals			Expatriates		
	2012	2013	2014	2012	2013	2014	2012	2013	2014
CNOOC	91	120	123	57	78	87	34	42	36
TEP	195	244	166	98	123	125	97	121	41
TUOP	184	182	143	168	169	135	16	13	8
Total	470	546	432	323	370	347	147	176	85

Source: OAG analysis of National Content Reports from oil companies for 2012-2014

Figure 30. Employment of Ugandan Nationals 2018-2019 (Figures provided by PAU)

Employment of local people by year (percentage or actual numbers)	Year	Total Numbers (direct employment) for all companies	Percentage (%) of total persons employed
	2018	168	77
	2019	245	89

Moving forward, data provided by the PAU (Figure 30) show local employment across the three main operating partners reaching 77% in 2018 and 89% in 2019. As such, it is clear that a certain degree of job role localisation has taken place, the extent to which this represents a changing business model was discussed among interview respondents. One government respondent highlighted his certainty that localisation of the workforce was a result of the oil price collapse and a changing operator mindset. In responding to a question about the impact of the oil price collapse, the respondent noted,

¹¹ At this point it is interesting to note the misinformation within the sector. A document noted as "Report Presented by the Minister of State for Energy to the Parliament" claims that "in 2013, Tullow Oil employed a total of 203 people out of which 80% were Ugandans, CNOOC employed about 115 people out of which 70% were are Ugandans & Total employed over 500 people out of which 80% were Ugandans" (Doc: Areas Open for Competitive Bidding for Petroleum Exploration Licences in Respect of the Second Licensing Round in Uganda, 2013). In contrast, the OAG Report is considered accurate.

“The companies have totally changed their thinking. Initially companies would feel like, yeah, it's better for us to get our guys there, but they now understand that to see when you build capacity for these local companies, for these individuals, you train them, you give them this case, they can do better.” (24 June 2019)

The majority of respondents were more cautious, contending that most of the managerial and advanced technical roles remain occupied by expatriates. Interview participants were largely in agreement that Total and CNOOC had been unwilling to localise certain managerial positions and adopt a substantially more localised employment model since the oil price crash. As such, the workforce statistics in Uganda demonstrates the progression that has been made but also that there remains room for further localisation. Uganda's workforce localisation position is perhaps comparable with neighbouring South Sudan in 2015, where Tiitmamer notes, “South Sudanese account for 80% of employment in the DPOC (Dar Petroleum Operating Company), 88% in SPOC (Sudd Petroleum Operating Company) and 85% in GNPOC (The Greater Nile Petroleum Operating Company)” (Tiitmamer, 2015, p. 14). Once again, the evidence suggests that CNOOC and Total were unwilling to abandon the objectives discussed in Chapter 5, namely CNOOC's mandate to provide opportunities for the Chinese citizens in their employment and Total's rigid recruitment and onboarding processes. A government employee noted that some locals had been promoted, but agreed with the aforementioned sentiment that operators had utilised loop-holes to maintain some expatriates,

“In Uganda what happened is true, companies sort of work around it, they would change some job titles, they would send other expatriates to other areas and then maybe elevate a few local ones who survived to stay around.” (25 June 2019)

This opinion was echoed throughout the interview process; despite the progression in localising some roles, respondents questioned whether the operators, notably CNOOC, were committed to the localisation of well-remunerated, primarily managerial positions. It was frequently highlighted that Tullow and Oranto, albeit much smaller companies,

achieved greater workforce localisation and are operating without foreign expertise; a model which many Ugandans hope to see CNOOC and Total adopt.

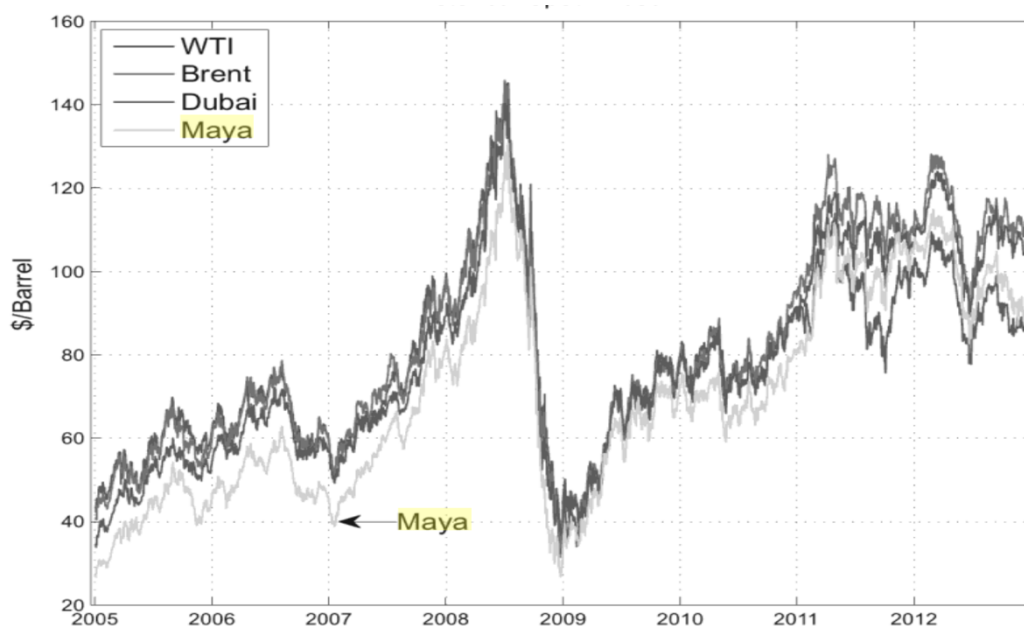
A secondary finding concerns the immediate impact of the oil price crash on expatriate staffing in Uganda. Respondents contend that in protecting the short-term financial viability of their operations and in light of the cost-pressures of the price crash, operators sought to shed their most expensive and easily releasable employees. This reaction was not limited to Uganda, even operations in actively producing nations saw operators cut jobs in order to protect the short-term profitability of the companies. For example, in December 2014, ConocoPhillips cut 230 of 1,650 jobs in UK, whilst reducing its global capital expenditure budget by 20% (BBC News, 2014). In a more open discussion, a number of respondents saw the staffing cuts as a pre-emptive measure, as the accelerating global supply of oil saw no signs of abating and operators anticipated oil prices falling further. A former operator respondent noted,

“When, you know, the oil price started going the other way. So the first thing that the company had to do was basically look through that personnel and see which people can go first, which contracts were up for renewal and the majority of those were of course expatriate staff, who were doing consultancy work. So they, they decided to do like an accelerated development programme, where you learn as much as you can from the expat that's leaving, right so that when they have left, you do the job that they are doing, which is appreciated, that's where I gained what (experience) I could, from there” (26 June 2020)

This narrative was repeated by a number of interview participants and is supported by the data in Figure 31. In the below figures we can observe expatriate staffing greatly decreased between December 2013 and December 2014, concurrently we can see the spot price of Brent Crude falling by over 40% from June to December 2014 in Figure 32 It is also worth noting that a medium-heavy, waxy crude like that discovered in Uganda is likely to price lower than Brent or West Texas Intermediate (WTI), meaning that future operations in Uganda may have appeared less financially viable than those in other countries. In noting price comparisons with a heavy crude benchmark, Western Canadian Select

(WCS) which has a low API¹² of 19-22 degrees and is priced significantly cheaper than WTI, in March 2015 the price differential of USD 14.25 or 28.5% lower when WTI is at USD 50 per barrel (The PAU claims Ugandan Crude has a API range of 17-31 degrees, albeit with a lower sulphur content than WCS). As noted by Tim Simard, head of commodities at the National Bank of Canada, when the global price of oil is lower "the first barrels to be turned off in a low-price environment are heavy barrels" making WCS "closer to the floor" than WTI (Pett, 2015). As such, operations in Uganda are "closer to the floor" than other operational sites around the world. One respondent contended that Uganda's crude will be similar to regional products, Dar Blend and Nile Blend, whilst internationally similar to Maya Blend, a heavy crude. Spot prices for Maya Blend are not readily available, however the below historical data (Figure 31) demonstrates that the Maya Blend normally trades at a discount against the main industry benchmarks.

Figure 31. Historical Spot Price of Maya Blend (Swindle, 2014, p. 41)



¹² A crude oil will typically have an API between 15 and 45 degrees. Higher API indicates a lighter (lower density) crude. Lower API indicates a heavier (denser) crude. Light crude is typically in the 35-45 API range, which includes most of the highest valued crudes such as Brent and WTI.

Over the course of 2014, the data show that Tullow reduced expatriate staffing by 38%, whilst only reducing Ugandan staffing by 20%, meanwhile, Total reduced its expatriate staffing by 59% and actually increased national staffing by 4% (Figure 33). A similar relationship cannot be observed within CNOOC, as expatriate staffing remained the same and local staffing increased. It would be incorrect to assume that the entirety of these expatriate job losses reflect the falling oil price, as we must also acknowledge the non-responsiveness of the government to the field-development plans, however, interview data proposes a strong correlation between the collapse in the price and the repatriation of expatriate staffing. An operator employee reinforced this data,

“If you look at the company journals for Tullow Oil or Total in 2012-2014, there were more expatriates, houses being rented for them, they had drivers as well, in the crash, 2014, most of them went back” (20 June 2020)

Figure 32. Spot Price of Brent Crude 2013-2014 (MacroTrends)

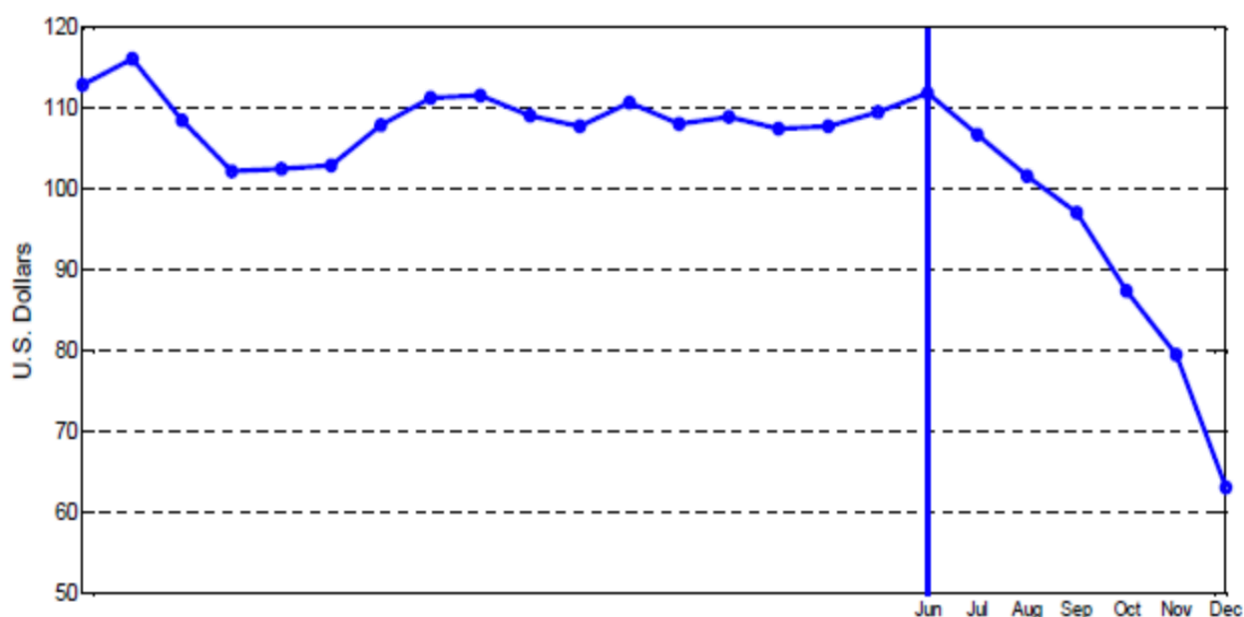


Figure 33. Operator Employment and Salaries 2012-2014 (OAG Report, 2015)

Company	Category of employees	December 2012		December 2013		December 2014	
		Number of staff	Amount (UGX)	Number of staff	Amount (UGX)	Number of staff	Amount (UGX)
CNOOC	Nationals	57	183,306,451	77	270,212,000	87	316,828,672
	Expatriates	34	1,448,747,277	36	1,505,739,129	36	1,502,862,690
	Total	91	1,632,053,728	113	1,775,951,129	123	1,819,691,362
	% to Nationals	63%	11%	68%	15%	71%	17%
TEP	Nationals	98	397,620,000	124	586,556,093	129	661,151,723
	Expatriates	55	2,790,388,948	92	4,972,070,149	38	2,103,601,187
	Total	153	3,188,008,948	216	5,558,626,242	167	2,764,752,910
	% to Nationals	64%	12%	57%	11%	77%	24%
TUOP	Nationals	168	1,063,494,469	169	1,686,961,848	134	1,557,423,106
	Expatriates	16	1,085,999,938	13	577,821,869	8	304,975,533
	Total	184	2,149,494,407	182	2,264,783,717	142	1,862,398,639
	% to Nationals	91%	49%	93%	74%	94%	84%

Source: OAG analysis of December salary payments from CNOOC, Total E&P and TUOP. Deletions and additions during the year not included

It was also noted that many of the remaining staff saw their salaries and other allowances cut as a further response to the falling oil price. An operator employee gave the following assessments of the impact,

“By default, the bottom line is affected. The prices, everything just came crashing down. They could no longer afford to bring in all the fancy labour, expatriates and also (...) Just to add on to what she has said, people's salaries were also reduced, by up to 20% and cutting everybody's salary, some allowances were scrapped, privileges that were given before were also scrapped” (24 June 2019)

Substantial job and salaries cuts were naturally accompanied by a reduction in recruitment and internship opportunities, although the data does show considerably greater uptake in 2019. Young professionals interviewed for this research found that their career opportunities in oil and gas had been greatly damaged by the oil price crash, causing many to divert

and search for roles in other industries. A young professional noted that internships were very hard to come by from 2015 onwards, with only Icon Industrial Services (a core analysis lab) hiring interns. With regards to employment, respondents were very dismissive about the opportunities available since the oil price crash, it was noted that,

“They’ve been taking one or two brand new graduates every year” (23 June 2019)

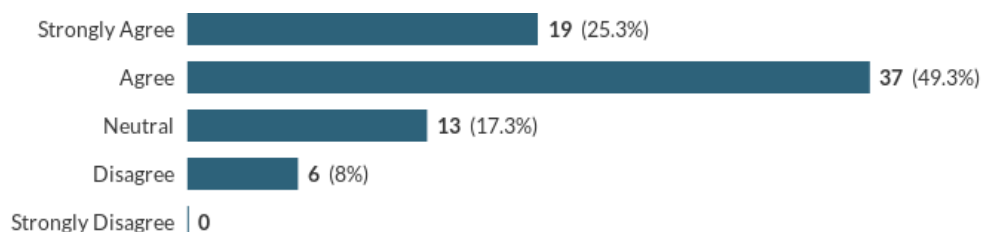
In summary, it is clear that there has been an increase in workforce localisation, although there is evidence that operators, CNOOC especially, are unlikely to move to localise managerial roles in the near future. The data infer that lower oil prices have engendered an exodus of foreign labour and the accelerated promotion of a number of Ugandans. The difference between Tullow’s workforce localisation (93% in 2013) and all operating partners in 2019 (89%) suggests that there is still capacity for greater localisation in the near future; although, when the industry restarts in Uganda, greater expertise will be required and it is highly likely that expatriates will be needed to undertake specialised roles. Furthermore, if the assumptions discussed in Chapter 5 are correct, an IOC like Total may take longer to localise certain positions whilst CNOOC may always look to favour Chinese expatriates in senior positions, further workforce localisation within operating companies may not materialise. This is likely to be compounded by the most localised operator, Tullow Oil, farming-down its operations in Uganda.

6.4.3 Effect of the Oil Price Crash on Operator Led Local Content Development

This study found two primary effects of the oil price crash on local content development. Firstly, it was noted that there was an immediate fall in operator spending on local content development. The second is the more recent movement towards a more collaborative approach to broad-based local content development. The increased involvement of the operators in, primarily, donor-led local content development initiatives is consistent with the pressures engendered by the lower price environment; reducing costs but also ensuring the development of local capacity which, in turn, may reduce future operational costs and reliance on expensive, foreign inputs.

Respondents agreed with the premise that lower oil prices should incentivise greater operator adoption of local content and involvement in its development. Questionnaire respondents were in agreement that ‘The oil price crash in 2014 has intensified the need to develop local competences in line with operator requirements’; 74.6% of respondents ‘strongly agreed’ or ‘agreed’, whilst only 8% ‘disagreed’.

Figure 34. Questionnaire Responses



A supporting comment from the interview data reads,

“So, the lower price if they hold, it actually even prescribes greater percentages and we must grow.” (25 June 2019)

The logic that lower oil prices would engender greater attempts to localise was frequently proffered around the world at the time of the oil price crash, something I experienced personally at many conferences (Getenergy Global 2015, Conference Report). However, in many places, the falling oil prices saw long-term strategic goals such as localisation become, temporarily, of secondary importance. Interview participants considered that the immediate impact in Uganda was for operators to reduce further investments into non-operational areas, local content development was included within this. As staff numbers decreased significantly, we can also assume that less financing was required for operator staff development. Resultantly, immediately following the oil price crash, operator involvement in local content development decreased significantly. Respondents spoke of local content development as an investment, one which would be repaid in a qualified workforce that can ensure the operational excellence that the company expects; an operator employee discussed the immediate reaction of the operators, noting how the shock of the price crash led to the prominence of short-termism,

“And if you ask any entity that is a profit-making entity, they cannot invest at that point and they are right. “I don't know where it's going, you're not making a decision. The global prices so low, I cannot invest my money right now without knowing if I'm going to get my money back or not.” And it's a wise decision.” (24 June 2019)

Since 2017/2018, however, there has been an upturn in operator involvement in broad-based local content development, albeit with seemingly fewer financial contributions. Whilst data highlight that spending is still below pre-crash levels, operator involvement in local content development, particularly broad-based local content development, has become more collaborative, focused and effective. With fewer staff and a more localised workforce, it is seemingly logical that operator spending on the development of its own staff is lower than the period 2012-2014 (Figure 19 - Chapter 5). Instead, it was noted that operators have become increasingly involved in donor-led, broad-based local content development initiatives, an area primarily beyond recoverable local content spending.

Broad-based local content development in Uganda's oil industry has benefited from increasingly relevant donor interventions in recent years and this is where we are seeing greater operator cooperation with the project implementors. The involvement of operators, primarily Total and Tullow, and other industry players with donor agencies can lead to improved development outcomes through mechanisms to increase alignment, which in turn informs relevant and well-implemented local capacity development initiatives that can go some way to satisfying future industry requirements for qualified labour and suppliers. Operator collaboration with GIZ, headlined by the goal of delivering an accredited technical workforce, and what many believe is broad Chinese involvement in the creation of a Chinese technical academy, 'Sunmaker Oil & Gas Training Institute', are manifestations of a more focused approach to broad-based local content development. These developments are still very recent, with respondents suggesting that the impact of these interventions on the wider workforce and supplier competencies was only becoming manifest during this study's fieldwork in 2019.

CNOOC's role in the arrival of Sunmaker Oil & Gas Training Institute in Kampala is uncertain, however, the accredited institute, substantial in size and well-resourced, is already playing an important role in upskilling and training Ugandan professionals for the oil industry. The speed at which the facility was constructed (by a Chinese contractor) and the institute's development from nothing to an operational training facility is remarkable, especially considering the challenges faced by indigenous institutes (More on indigenous institutes in Chapter 7). It should also be noted that the Sunmaker Oil & Gas Training Institute is the SOE's first facility globally and is not simply a franchised training institute, meaning it had no previous experience to learn from, making its rapid development even more impressive. Whilst the institute operates commercially, many of its current cohort are beneficiaries of a 27-million-dollar World Bank project, known as the Albertine Region Sustainable Development Project, which, as part of the project's remit, is funding the technical education of 600 individuals from the Albertine region. Its curriculum has also benefitted from the input of contracted international experts.

Grey literature, media publications and the data obtained in this study highlight that the nexus of interaction between stakeholders has developed since the oil price crash. Respondents noted that development agency interventions in broad-based local content development have benefitted from greater engagement with industry leaders, notably operators such as Tullow and Total but also potentially future EPC contractors such as CB&I. A representative from a development agency noted the changing attitude among operators,

"The operators became more adaptive in developing content and inclusive approach in the finalisation of the local content policy to address the negative effects that might rise due to inclusivity (lack of inclusivity)." (18 June 2019)

The E4D/SOGA project, being implemented by GIZ, reportedly at the request of Total, and according to some respondents, the request of other operators, is the most substantial local content development initiative in Uganda's oil industry. The role of the operators in the E4D/SOGA project was debated among respondents, however, the GIZ website categorises its stakeholders for the project's East Africa remit as a whole; it is interesting to note

that Tullow Oil is listed as one of the few financiers, Total E&P as a partner (of which there are many), and CNOOC, not at all. The level of commitment to the project is reflective of the attitudes of the operators to local content and its development as discussed in Chapter 5. Meanwhile, other interventions such as the World Bank's Albertine Region Sustainable Development Project and involvement in UPIK's development saw less interaction with operators but greater engagement with other stakeholders, including major EPC contractors like CB&I.

The collaboration, particularly between Total, Tullow and GIZ for the E4D/SOGA project, but also in broader partnerships across East Africa with DFID (now FCDO - Foreign, Commonwealth and Development Office), NORAD, the EU (European Union) and Royal Dutch Shell, is seminal in its engagement of such a broad array of stakeholders, notably operators, engendering the development of relevant competences from HSE accreditations to bid management. Whilst there have been a number of programmes led by donor agencies in this area, respondents highlighted the importance of the project's alignment with the capacity needs analysis and the ongoing coordination between funding bodies, advising parties and implementors. In some respects, the notion of the multi-stakeholder environment has matured in recent years as we are beginning to see the impact of effective coordination between donor partners and the industry. This can also be considered a reminder that although operators are employers and contractors of local content, their knowledge and resources to develop it is often incomplete and traditionally considered to be far beyond their remit.

Interview participants highlighted that operators, on their own, had shown little scope or interest for Ugandan enterprise development. However, through the E4D/SOGA programme, operators, through less effort and funding of their own, can have a degree of input into the service sector. The programme is assisting in upgrading HSE standards and practices across Ugandan enterprises, bid management training and coaching and an SME support programme being delivered through Stanbic Bank's Business Incubator. It is clear that through greater collaboration, not only have local content development initiatives

become more effective, but it has also broadened the scope of initiatives that operators can become involved with.

The research highlights that the burden of delivering local content in Uganda has become a cooperative effort, although heavily reliant on donor interventions. The value of shared financial and technical burdens cannot be underestimated in the absence of business certainty brought about by low oil prices and non-approval of the development project; a factor that has seen operator local content development budgets decrease considerably. Throughout this research, respondents sought to highlight the benefit of cooperation between multiple stakeholders with broadly aligned objectives, however, they frequently highlighted occasions when opportunities for collaboration and cooperation had been missed. In concluding this subchapter, it is clear that the oil price collapse had one immediate impact on operator led local content development, which was a substantial reduction in spending and involvement. Beyond the short-term impact, respondents, particularly those from the international community, recognised and commended a movement to a more focused and seemingly more efficient approach to local content development through collaboration with donor and development partners in broader coalition with other industry stakeholders.

6.5 Uganda's Donor Landscape - Increasing Involvement in Ugandan Capacity Development

Although there has been greater donor involvement in Ugandan local content development since the oil price crash, it is difficult to suggest that this is a direct result of falling oil prices as the oil price crash did not engender any specific pressures on the donor community. Whilst some respondents contend that the interventions of donors in upskilling Ugandans across the oil and gas industry reflects a response to conditions brought about by the oil price crash, it is equally the case that there has been a broader alignment of donor agency interventions across all of Uganda's developing sectors to "create employable skills and competencies relevant in the labour market instead of simply issuing academic

certificates” (The World Bank, PAD, 2015). Although, the genesis of this alignment appears to have developed around the same time as the oil price crash, it is seemingly a timely coincidence. The World Bank Project Appraisal Document (PAD) notes economic growth opportunities identified by the GoU¹³, including oil and gas, construction, hotels/tourism, manufacturing, and agro-processing, all of which are reflected within donor interventions. Many interventions, such as those of the World Bank and Enabel, respond to multiple sector skilling requirements, whilst the E4D/SOGA project is focused on resource-based industries and their supply chain sectors such as construction, infrastructure, transport and logistics, catering and food supply.

The World Bank, for the latter part of the previous century, focused on creating governance states, partially through the ability to dispense hard currency (Harrison, 2004). However, in the 21st century, there has been movement away from Structural Adjustment Programmes (SAPs) towards the Comprehensive Development Framework (CDF) enshrined within an interventionist country strategy led by a country itself (Owusu, 2013). This notion of a country strategy led by the country itself goes some way in explaining the increasing attention of the international development community to local capacity development in Uganda. For example, the World Bank’s “Albertine Region Sustainable Development Project” seeks to improve regional and local access to infrastructure, markets, and skills development in the oil rich Albertine region, reflecting Uganda’s desire to focus on capacity development in the oil sector (among others), the World Bank’s contribution to free market development and, more generally, a recognition of African leaders’ call for ‘trade not aid’. As well as funding the development of institutions, the World Bank’s project has provided scholarships for hundreds of Ugandans to receive a technical education for the oil and gas industry at Ugandan institutions; as such, the organisation’s contribution is very relevant to the current context of Uganda’s oil and gas industry.

This research confirms that different donor agencies are characterised by differing roles and objectives in what Mawdsley calls the “landscape of development” (Mawdsley, 2012)

¹³ A number of these key sectors were highlighted in documents such as the Skilling Uganda: BTVET Strategic Plan 2011-2020 (2011)

and reaffirms the newfound pluralism of the donor community having witnessed the emergence and re-emergence of 'non-traditional' development corporations. This study notes that Norway's longstanding commitment to sound resource governance and robust institutions has been preserved through guiding Uganda in the creation of a tripartite system for oil governance, meanwhile DFID's (FCDO) world-leading commitment to social protection is as strong in Uganda as it is across Africa and the Indian sub-continent (Hickey et. al, 2020). Among development objectives in energy & climate, health, infrastructure development, water, governance, GIZ is playing an increasingly important role, globally, in vocational training (GIZ India Bulletin) which is being continued in Uganda as we can see from the implementation of the E4D/SOGA project itself.

It is clear that Uganda as a whole reflects the changing donor landscape across the African continent. In the 1990s DAC donors (Development Assistance Committee (DAC-OECD) accounted for 95% of international development aid on the continent, however, as noted by authors such as Manning (2006), the turn of the century marked the end of such dominance in the sphere and the return of non-DAC donors. Alongside the emergence of the African Development Bank (AfDB), who also supports Ugandan SME development along with E4D/SOGA and Stanbic Bank, it is manifestly clear that China has re-emerged as a major donor on the continent and in Uganda¹⁴. I was not able to reach anyone involved in Chinese aid to Uganda but during my fieldwork I was invited to an AfDB SME development workshop, focused on the oil and gas industry. Nevertheless, respondents from the semi-structured interviews failed to highlight the AfDB as a major contributor to local capacity development for Uganda's oil industry.

The broader context of donor pluralism raises the question of the role of Chinese development corporations in Uganda's local content story. Zhou (2018), highlights the growing

¹⁴ In 1974 Chinese aid reached the remarkably high proportion of 2% of gross national product. The proportion declined greatly in the years after, but the absolute quantity of aid has risen with China's growing prosperity.

openness of China to engage in Trilateral Development Corporations (TDC), trilateral projects and more equitable global development partnerships. Chinese donor involvement in Uganda has also taken place in the absence of TDCs with traditional western donors, with projects ranging from agriculture to healthcare. However, it is clear from existing literature, such as Mohan (2010), that the Chinese approach in Africa, as a whole, favours large scale infrastructure projects over sound institutional development and SME growth as a vehicle for economic development; the latter two being favoured by OECD donors. Critics claim that Beijing uses their development finance to create alliances with rulers of developing countries, to secure commercial advantages for Chinese firms, and to prop up corrupt and undemocratic regimes in order to gain access to their natural resource endowments (Tull, 2006; Kaplinsky et al., 2007; Naím, 2007; Pehnelt, 2007; Tan-Mullins et al., 2010; Marantidou & Glosserman, 2015). Respondents in this study noted very little Chinese donor involvement in Ugandan local content development, although some noted Chinese sponsored roads and infrastructure in delivering overall benefit to the economy and servicing the oil industry¹⁵.

6.5.1 Stakeholder Cooperation and the Creation of Pockets of Effectiveness

In this case study, the importance of an interventionist approach cannot be underestimated, as the data infer that donor interventions have been integral to the delivery of local content and in the creation of exceptional academic and vocational institutions. Pockets of Effectiveness (PoE) refer to exceptionally well-functioning government or government-supported agencies in countries that have otherwise poor governance and weak public sectors (Leonard, 2008, 2010). In Uganda, notably through the E4D/SOGA programme, but also through the involvement of other donor stakeholders such as the Belgian Development Agency, Enabel, and the World Bank, it is possible to observe the delivery of effective capacity development projects, albeit, sometimes without considerable Ugandan state contribution.

¹⁵ It is worth noting that Chinese firms like the Chinese Communications Construction Company (CCCC) continue to dominate the road construction industry.

Recent projects have and continue to play an important role in upgrading institutions and courses to develop human capacity across the industry, including accredited welders and craftsmen, whilst providing significant support to nascent Ugandan enterprise. The degree to which these projects take place beyond government remits, notably the use of private institutions for education and training interventions and not state institutions, potentially reflects the prevalence of ‘Thinking and Working Politically’, taking into account Uganda’s bureaucratic and often unpredictable political processes. However, another manifestation of the increasingly politically informed interventions is the involvement of the development agencies beyond purely financial contributions. This can be observed in project appraisals which assign substantial weight and funding to ‘institutionalising systematic reforms’ and salaries for the international consultants who oversee project implementation. As will be discussed in the following writing, the approach taken by development agencies and very notably the E4D/SOGA project, is delivering increasingly relevant and improved development outcomes through cooperation and building on previous development interventions.

Respondents noted that the E4D/SOGA project is being implemented at the request of Total and reflects the industry’s need for good technical skills, however, the programme is not limited to Uganda, or reflect countries of Total’s operations, and is also being implemented across other East African nascent oil and gas industries (Kenya, Mozambique and Tanzania). Since 2015, the German Federal Ministry of Economic Cooperation and Development (BMZ) together with the UK Department for International Development (DFID - moved to new Foreign, Commonwealth and Development Office in Sept 2020 with reduced budget), the Norwegian Agency for Development Cooperation (NORAD), the EU and oil operators have collaborated with the Uganda government and private sector to implement a project aimed at boosting the capacities of Ugandan youth and enterprises. As discussed, the central instrument of cooperation, primarily between industry and the donors, was considered vitally important among respondents in ensuring the programme’s ongoing relevancy and improved development outcomes.

When discussing PoE, Roll (2014) comments on underlying “foundational legacy”, a term which notes factors that are not sufficient to produce exceptional organisations but are

necessary in that without their existence and interactions, PoE might not occur. Numerous donor initiatives and ongoing but often ineffective Ugandan government involvement has, on its own, not delivered PoEs. However, the accumulative interventions coupled with increasingly relevant and politically informed donor support is delivering improved outcomes. Manifestly we can see that public sector institutions are partnering and providing a practical base (such as the Nakawa Training Institute, also a former recipient of Korean development aid) for these upskilling programmes to take place. Although many of the practical bases being used by E4D/SOGA and Enabel are private institutions such as The Assessment and Skilling Center (TASC), Stanbic Bank's Business Incubator and Sun-maker, and resultantly, are bypassing state institutions.

In following on from the notion that donor interventions benefit from existing capacity, as discussed by Roll (2014) and Kuwajima (2016), PoEs can be attributed to “stylised sequential order” which explains the process of evolving and overcoming obstacles which in turn allow the institution or agency to become exceptional. Whilst the E4D/SOGA project as well as those being implemented by Enabel and the World Bank are partnering with both public and private institutions, the notion of stylised sequential order suggests that these institutions have been able to overcome obstacles such as corruption, a lack of political willing and mismanagement which in turn has made them viable partners for development agencies. UPIK, for example, despite a number of years of underachievement, has become an exceptional public institution in that it is now capable of delivering the accredited courses required; in 2018, UPIK launched 6G Welding training in “partnership with CB&I, GIZ E4D/SOGA and Bureau Veritas” and had trained 50 welders to American Welders Society standards by October 2019 (Project Update provided by GIZ). This, in turn, is owing to the earlier involvement of the World Bank, who’s ongoing projects sought to upgrade the UPIK and Uganda Technical College of Kichwamba (UTC) and add a new third institute in Nwoya district through investments in physical infrastructure, goods, curricula development, and instructor training.

In Uganda, the commitment of willing and well-resourced donors has been integral in the development of PoEs. Whilst these institutions existed prior to the most recent interventions, donor funding and expertise has transformed average institutions and courses into strong and relevant offerings for the oil industry. Respondents highlighted institutions such as UPIK and Nakawa Vocational Training Institute as being prime examples of this. As we have noted, the oil price crash has not engendered greater operator investment in the delivery of broad-based local content development, particularly in light of the deteriorated planning horizon. And, as will be explored in Chapter 7, Ugandan governance alone is unlikely to deliver the PoEs required to develop professionals for the oil and gas industry or engender a wave of Ugandan enterprise. As such, the involvement and interventions of donors in recent years has been entirely necessary in actualising local content development objectives by implementing a well-funded and well-aligned set of programmes and initiatives. Whilst the increased relevancy of donor interventions has not been induced by the oil price crash, it is certainly timely.

Figure 35. E4D/SOGA Project (Data Provided by GIZ 11.2019)

No.	Project	Planned Activities	Target numbers	Current Status
A	ENTERPRISE DEVELOPMENT			
1.	Upgrading HSE standards and practices in Ugandan enterprises (06/2019 - 12/2019)	<ul style="list-style-type: none"> • Development of ToR to up-scale the project. • Evaluation of bids and award of contract • Project kickoff • Call for applications and selection of companies • NEBOSH Training of 30 local companies (2 decision makers from each company) • Coaching for 30 companies • ISO 45001 certification of 6 of the best 30 companies 	<ul style="list-style-type: none"> • 60 decision makers NEBOSH certified • At least 6 companies ISO 45001 certified at the end of project • 300 jobs created in participating companies 6 months after training and coaching ends 	<ul style="list-style-type: none"> • The Assessment and Skilling Center (TASC) was contracted to implement the HSE project on behalf of E4D/SOGA following a competitive tendering process • Following a call for applications in print (Daily Monitor and New Vision of 18th June 2019), online (TASC, PAU, UCMP and AUGOS, among others) and on radio (Central Broadcasting Station and Capital FM), Seventy-One (71) companies applied for the training. 30 of whom were selected based on a criterion developed in line with E4D/SOGA performance indicators. • This project was launched on Monday, 22nd July 2019 at Fairway Hotel.

2.	Bid management training and coaching II p (06/2019 - 12/2019)	<ul style="list-style-type: none"> • Development of TOR to upscale the project • Evaluation of bids and award of contract • Project kickoff • Call for applications and selection of companies • Training of 65 local enterprises (2 people per company) • Coaching for 65 companies 	<ul style="list-style-type: none"> • 130 decision makers trained and coached to improve bid management within their companies • 500 jobs created in companies due to increased number of bids won 6 months after training ends 	<ul style="list-style-type: none"> - After a competitive tendering process, E360, emerged as a winner and was contracted to implement the bid management training and coaching project on behalf of E4D/SOGA - E360 then made a call for applications for Ugandan companies willing to take part in the training. A total of 190 companies applied. 65 of whom were selected to participate in the training that was launched on Monday, 15th July 2019 at Hotel Africana in Kampala - The launch marked the beginning of the training.
3.	SME support programme with Stanbic Bank's Business Incubator (06/2019 - 12/2019)	<ul style="list-style-type: none"> • Development of project concept and project documents • Contract signing • Project kickoff • Training and improved coaching of -300 SMEs in Kampala according to tested programme • Upscaling the incubator's approach to 160 SMEs to be trained in Gulu and Mbarara districts (new tender for service provider in regions) 	<ul style="list-style-type: none"> • 300 SMEs in Kampala • 160 SMEs in Gulu and Mbarara (in total 760 decision makers) • 300 jobs created in participating companies due to increased competitiveness 	<ul style="list-style-type: none"> • Project supporting documents for this project were successfully compiled and authorized by E4D/SOGA's Country Office. • A contract was signed between Stanbic Bank's Business Incubator and E4D/SOGA. Formerly, Stanbic Bank's Business Incubator was offering SME training in Kampala only but with E4D/SOGA's technical and financial support, the Business Incubator will be able to extend their services to Gulu and Mbarara this year. As such; • SME training in Kampala is ongoing • Training to start in the regions: • Gulu: 6th August 2019 • Mbarara: 13th August 2019
	SKILLS DEVELOPMENT and MATCHING			

4.	Professional Drivers Training Project Uganda (09/2016 - 05/2020)	<ul style="list-style-type: none"> • Develop business model for SWRW HGV and PSV school • Master trainers training • Teachers training for school and broader sector • Adapt EAC curriculum to industry requirements, specifically oil and gas • Outreach campaign • Train drivers according to EAC Standard (done by SWRW) • Develop synergies with other private partners • Match drivers 	<ul style="list-style-type: none"> • 500 drivers trained by 2020 based on the EAC curriculum (refresher or new license acquisition) • 150 drivers to find employment in Uganda's transport and logistics industry. 	<ul style="list-style-type: none"> • The Heavy Goods Vehicles and Passenger Service Vans training School is running at full capacity (delay due to long registration process) • 133 drivers trained including • 3 master trainers and 12 driving instructors • The training is done according to the East African Curriculum by E4D/SOGA's implementing partner Safe Way Right Way • Adaptation of EAC Curriculum to industry requirement, particularly, oil and gas is ongoing through consultations with relevant stakeholders • Bid for Total E&P tender to train 100 HGV drivers handed in in line with development of synergies with other private partners
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5.	Skills for Construction Project (S4C) 10/2018 - 12/2019 (extension planned to 02/2020)	<ul style="list-style-type: none"> • Develop project concept with industry and TOR • Tender for service provider and awards of contract • Develop practice-oriented training according to ECITB standards • Outreach campaign using IT-tool and selection of students • Training of student • Career advice and matching through consultant • ECITB accreditation of 1 Vocational Training Institute 	<ul style="list-style-type: none"> • 1,500 students trained in basic construction, HSE and level 1 ECITB • 525 students trained to ECITB level 2 in rigging or pipe fitting • 900 students placed in internships and jobs 6 months after the training 	<ul style="list-style-type: none"> • Project concept was developed • Tendering for a service provider was done and the contract was awarded to Solid rock and GOPA. The two firms are a partnership implementing on behalf of E4D/SOGA, the Skills for Construction (S4C) Project. • The S4C project was launched on 26th June 2019 at Nakawa Training Institute in Kampala by the Minister of State for Minerals, Hon Peter Lokeris • Practice oriented training according to ECITB standards was developed and adapted to the training • Outreach campaigns were undertaken to promote and attract students to apply for the training both in Kampala and Pakwach including, on radio adverts and brochures, among others. • 130 students were trained and have completed level 1 ECITB • 66 students that received training have completed level 2 ECITB • Internship matching kicking-off • Further outreach campaigns planned • ECITB accreditation of 1 Vocational Training Institute is ongoing
6.	Total GIZ welders training	<ul style="list-style-type: none"> • Contracts for training providers awarded by Total • E4D/SOGA supports project management and quality assurance and contributes a module on work readiness as well as internship placement for selected students 	200 welders trained and to American Welders Society 2G and 4G levels	<p>50 students completed training</p> <p>Opportunities for high quality internships in industry being assessed</p>

7.	Heavy Lifting (Planned to Start 08/2019)	<ul style="list-style-type: none"> • Development of project concept and documents • Contract signing • Project kickoff • Selection of students through HR firms • Training and certification of Heavy Lifting operators • Matching of graduates through HR firms 	Between 200 women, men and youth trained as heavy equipment operators and supporting trades	Project supporting documents were compiled
8.	Skills and Capacity for Organizational Productivity and Employment (SCOPE) (12/2016 - 08/2019)	<ul style="list-style-type: none"> • Project developed, awarded and kicked off • Capacity development of 5 VTIs to improve management, market orientation and attract and enrol fee paying trainees • Upgrade VTI workshops • Strengthen linkages between the VTIS and the private sector for apprenticeship, internship and sponsorship • Integrate work readiness and entrepreneurial trainings • Support VTIs to implement user friendly MIS • Support VTIs to form networks for sharing best practices 	<ul style="list-style-type: none"> • 2,000 people in Alberta region trained in relevant technical and practical skills for oil and gas related sectors • 5 VTIs is strengthened • 1 VTI supported to achieve C&G accreditation • 500 people certified in C&G in trades 	<ul style="list-style-type: none"> • 1,245 people trained • 191 students received international certifications • 200 students placed in industry placements • 415 students placed into decent jobs tot • Activities stopped in March 2019 due to allegations of fraud which have been confirmed by VSO and GIZ forensic audit reports

9.	Ready to Work (RtW) Project (08/2017-11/2019)	<ul style="list-style-type: none"> • Project developed with Barclays Bank and UMA • 7 VTIs and 3 universities selected as partners • RtW Training plan developed with VTIS • Training of VTI trainers • Coordinate trainings at VTIS • Support and advise UMA on matching students • Develop an IT-Tool to match graduates with private sector employers for internships • Impact evaluation study design 	<ul style="list-style-type: none"> • 20,000 Ugandans are trained • 5,500 graduates (50% women) trained in work readiness skills • 1,200 internships provided • 1,480 youth in jobs 	<ul style="list-style-type: none"> • 1,300 graduates trained • 366 students placed in internships and jobs • IT-Tool in final development stage • Local subsidy with UMA renewed
C	Further priorities 2019			

10.		<ul style="list-style-type: none"> • Use monitoring and evaluation of impacts to check/confirm project strategies and learn for future measures • Conceptualize phase II of overall regional programme in discussions with partners and funding partners (DFID, NORAD, BMZ, EU) • Country assessment and academic M&E support in Uganda to inform strategy for phase II, • Capitalize on current approach and the expertise developed and move from pilot to scaling up 	Not applicable	<ul style="list-style-type: none"> • RWI contracted, study designs almost ready for Skills for Construction and Ready to Work • Country assessment starts Monday, 29th July 2019, afterwards meetings with donors and National Steering Committee planned • Discussions with Donors at HQ level ongoing, BMZ has extended the commission until 12/2023, NORAD co-funding of 2nd phase verbally confirmed
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6.6 Conclusion

The data obtained in this research highlights that the oil price crash has engendered, directly and indirectly, small movements towards a more localised oil industry in Uganda. The exponential growth which many Ugandans were expecting has not been forthcoming. Instead, we can observe incremental developments, with the concept of an evolving and more local operating model, occasionally blurred with the notion of an industry forced into reactive changes in order to minimise costs. Nevertheless, the progress that has been made, albeit small, must be considered an important development.

It is possible to characterise the impacts of the oil price crash into short-term and long-term effects. Immediately following the oil price crash, we can observe a reduction of expatriate staffing and a reduction in local content development spending. More recently, the data point to greater job role localisation, highlighting that some nationals have taken on

the roles previously occupied by expatriates, a small realignment of operator procurement with government expectations in 2019 and a more collaborative approach to local content development. This collaborative approach, be it by design or good fortune, is delivering on many broad-based local content development objectives that will allow for greater local participation as the industry moves forward to production.

We can also observe subtle differences in operator commitments to local content in light of the lower oil price. Tullow was the first to localise procurement at a maintenance level, it appears that CNOOC and Total have moved in the same direction in 2019. A similar movement can be observed in employment, with CNOOC and Total moving towards the more localised position already occupied by Tullow. With regards to local content development, respondents contended that Tullow and Total, particularly, had increased their engagement with capacity development projects, notably the E4D/SOGA project with Tullow as financier and Total as a partner. CNOOC's role is less clear; the Chinese SOE Sun-maker has been set up in Kampala to deliver accredited courses for the wider industry but respondents were critical of CNOOC's absence in other broad-based local content development.

Respondents contended that operating more locally was a more cost-efficient business model and that one would expect cost-conscious operators to pursue localisation more readily than can be observed. As discussed in Chapter 5, it does appear that wholesale, accelerated localisation is in conflict with CNOOC's mandate to deliver work and contracting opportunities for Chinese people and businesses and Total's commitment to existing recruitment and onboarding processes and a reliable, international supply chain. As noted by an operator employee, the current proportional level of contracting will not be sustained when the industry restarts, as major international companies will be best placed to take on major contracts. As a result of the aforementioned factors, it is unlikely that we will see greater localisation in the short-medium term and following the approval of the field development project; although, the net-value to the economy will increase vastly with greater overall activity.

The increasing relevancy of donor interventions in developing indigenous oil and gas capacity was a major finding emerging from this research. Donor and development agencies have long filled a void in expertise and funding, in the case of Uganda, especially in areas related to education. However, more recently, the trend of development interventions to focus on the delivery of employable skills in developing sectors has seen donor relevancy grow. The popular narrative among respondents is that Total and Tullow played an important role in GIZ's implementation of the E4D/SOGA project in Uganda and that operators are continuing to work with the project implementor, this is supported by those in the development agency community. Whilst the nexus of interaction between stakeholders has played an important role in increasing the relevancy of donor interventions, the timely nature of these interventions, in the lower oil price environment, may prove to be vitally important as Uganda moves towards oil production.

Although further research would be necessary, I believe that there are few examples of a place where foreign stakeholders have been so integral to the development of local capacity for oil and gas. As such, it is clear that there are a number of shortcomings with regards to state-led local content development in Uganda; copious data obtained in this study suggest that this is a result of government failings, both concerning human and enterprise capacity development and engendering local participation. Respondents noted how Ugandan companies were originally only capable of providing very basic services, such as security and catering, even a Kenyan company was contracted to deliver logistics capability between Mombasa and exploration sites in Uganda. Indigenous capacity has developed over the past 15 years, however, some respondents were sceptical as to the extent to which Ugandans and local companies will be able to benefit as the industry moves forward. The following chapter explores indigenous contributions to local content and its development and looks to shed further light on local content shortcomings.

Chapter 7: The Ugandan Context, a Good Local Partner?

This chapter argues that there have been severe failings in the governance of local content which have hindered its timely development and negatively impacted its adoption. My research indicates that an incapacitated bureaucracy has mismanaged the actualisation of the government's local content objectives, failing to bring in regulation and legislation in a timely manner to mandate its adoption but also not implementing practical measures to aid the development of local capacity. This failing is particularly manifest within education; despite oil being discovered in the country 15 years ago, Uganda's universities and colleges are still largely unaligned with the needs of the industry. Resultantly a significant number of Ugandans have graduated from university or college on oil and gas related courses without the practical skills and accreditations required by the risk-adverse industry.

In this chapter I also argue that the involvement of the executive in oil governance has not been conducive to enhancing local content development and adoption in line with the government's own desire for a localised oil industry. My research shows that the President's decision to delay the progression of Uganda's oil and gas project to the 'development phase' has impacted the business confidence of operators, services companies and EPC contractors and their ability to invest in long term capacity development in Uganda. I also contend that the President's involvement and political influence on the administration of oil and gas has negatively impacted the inclusivity of the industry, allowing certain groups closest to the executive to benefit, notably from scholarships and career opportunities. It is also argued that CNOOC has benefitted from a preferential arrangement with the government and can dictate terms relating to local content due to Uganda's indebtedness to the Chinese state; this itself is also a consequence of executive intervention in resource governance and elite level bargaining.

7.1 Introduction

This chapter explores the role of the government, the public sector and Uganda's academic and vocational institutions in developing local content and making provisions to ensure local content objectives are achieved. Whilst local content regulation mandates that the operating partners and other companies conform with Ugandan objectives, the role of the state can be much more expansive in both contributing to and inhibiting the growth and adoption of local content, closely resembling a developmental state. Institutionalist theorists, such as Mkandawire (2001), have underlined the positive impact that dynamic and proactive state intervention can have in avoiding market failure in developing economies. These contributions, commonly referred to as dirigisme, also highlight the value of state intervention in local content and local capacity development.

As noted by Hansen et. al. (2014), outsiders are frequently puzzled as to why African governments "simply do not implement the right policies to benefit from extractive FDI" (Hansen, Buur, Therkildsen and Kjær 2014, p. 20). The notion of extractive institutions (Acemoglu & Robinson, 2012) goes some way to delivering an in-depth understanding of why some institutional frameworks do not always prevent corruption and other illicit behaviour. The Ugandan state and those who work for it have been no stranger to criticism, both within the country and by international observers. Existing research has highlighted the challenges and pitfalls of resource governance (Van Alstine, 2014; Pahl-Wostl, 2009) particularly across sub-Saharan Africa where many of Uganda's continental neighbours have failed to deliver the promised benefits of oil and gas. Despite the prophetic examples of Nigeria and Equatorial Guinea, among others, and the extensive research on good resource governance, Uganda's experience has not necessarily reflected literature on best practice (Thurber et. al. 2011; Tordo et. al. 2013,).

Contrary to this body of literature on best practice, Uganda's President, Yoweri Museveni, demonstrates a considerable degree of discretionary power which is indicative of the ineffective political system and administration which operates beneath him. In the absence of restraints and altruistic elites, few have reaped the benefits of the industry with a number of respondents noting that political elites had captured areas of the local content market.

As a result of a highly personalised form of governance and an under-resourced civil service, respondents talked of severe public sector lethargy across multiple arms of government, notably education, which further hampers attempts to deliver on local content aspirations. With further regards to political factors, respondents contended that Uganda's indebtedness to China has afforded CNOOC greater bargaining power and the capacity to flout local content regulations.

This chapter also discusses the challenges around the delivery of tertiary education¹⁶ in Uganda. Tertiary institutions play an important role in the development of future capacity for the oil and gas industry, from the relatively small number of degree educated professionals absorbed by operators to vocational training for broad-based local content in the wider value-chain. Despite the time afforded by the delay of the development project, it was found that Uganda's academic and vocational institutions have been largely unsuccessful in aligning their offering with the needs of the oil and gas industry, with the culpability seemingly not lying with the international stakeholders. Whilst many young Ugandans have invested their time and money to study and pursue a career in oil and gas, the pursuit for many has been a 'white elephant' with the promise of well-paid jobs, frequently noted in the media and pro-Museveni newspaper, 'New Vision', not corresponding to real prospects.

This chapter addresses my third research question. The chapter dives deep into topics pertinent to the Ugandan political economy, including its political settlement, institutional framework but also education, and assesses its impact on the oil and gas industry and the actualisation of local content objectives. In particular this chapter also analyses the state of Uganda's institutions in light of the president's discretionary power and penchant for micro-managing the oil sector. The first two sections of this chapter assess the impact of factors relating to Uganda's political economy on local content and its development in Uganda, with particular focus on the role of the executive body. Additional attention is

¹⁶ The World Bank defines tertiary education as including universities as well as trade schools and colleges, although some definitions varies.

given to misgovernance and corruption in section 3, criticisms frequently levelled at governments across sub-Saharan Africa. Sections 4, 5 and 6 assess Ugandan led progress in education, training and other capacity development initiatives.

7.2 The Political Environment Surrounding Oil and Gas in Uganda and its Impact on Local Content Adoption and Development

Akin to existing research on Uganda's resource governance (Tangri and Mwenda, 2019; Golooba-Mutebi and Hickey, 2016), this study acknowledges that the Ugandan government's approach to resource governance has not heeded the prophetic examples of the African states that have preceded them. This study finds that the government's management of the oil and gas industry has not been conducive to the development of local content, primarily due to the creation of an uncertain business environment characterised by delays and the unconstitutional involvement of the executive.

7.2.1 Separating Politics from Bureaucracy

Respondents of this study found it difficult to distinguish between the involvement of the executive and the bureaucracy despite the existence of measures (the Norwegian Model, as referred to in Chapter 2) to ensure commercial, policy, and regulatory functions are all managed by different administrative institutions and not the executive body. Historical studies have demonstrated a degree of separation between politics and the civil service in Uganda (Miller, 1975); it was noted that in the absence of political unity, there was little will to tamper with the colonial inheritance of a neutral civil service during the nascency of the Ugandan state, although the neutrality of the pre-independence civil service is debatable. Herrick (1969) also highlights that throughout the 1960s, appointments below deputy minister were made on the basis on merit, however, according to Miller (1975), Prime Minister Obote was aware of pressures to politicise the bureaucracy due to competing tribal interests for representation and appropriate distribution of social and development projects.

More recent literature notes that bureaucracy in Uganda has become highly personalised (Tangri and Mwenda, 2019; Wilkins and Vokes, 2018) favouring the discretionary power of

the President and bypassing formal institutions; in highlighting this, Golooba-Mutebi and Hickey (2013) note the establishment of the Medicines and Health Services Delivery Monitoring Unit under State House rather than within the Ministry of Health. Meanwhile, Okuku identifies the exceptional role of the executive in resource governance, “the President ensured the rescinding of the parliamentary resolutions and demanded the caucus to grant him powers to sign the new deals between Tullow, Total and CNOOC in total disregard of the resolutions. (...) In February 2012, the President ordered the Minister of Energy to sign new PSAs and Farm-down contracts with Tullow, Total and CNOOC worth \$2.9billion”¹⁷ (Okuku, J, 2015, p. 12; Baguma, Thawite and Nzinjah, 2012).

Questionnaire respondents believed that the President’s involvement in negotiations had been effective in promoting local content. Question 2.15 of the first questionnaire asked respondents whether they were in agreement with the following statement, ‘The executive body’s (the President) prominent role in negotiations with operators has been effective in promoting local content’; 51.3% of respondents strongly agreed or agreed with the statement, whilst only 22.3% strongly disagreed or disagreed. However, further investigation suggests that the President’s involvement has not been entirely positive, with most interview respondents lamenting his role in the delayed field development project and a number of experts questioning the impact of his interference on administrative effectiveness. It may be the case that the ability to provide open answers during the interview process allowed respondents to caveat their survey response, with many participants believing Museveni was committed to local content but not always supporting his government’s strategy for developing it and increasing its adoption.

The President’s reported level of involvement greatly undermines the institutional framework which had been put in place with the assistance of foreign experts, referred to as the tripartite Norwegian Model. Beyond oil and gas, literature acknowledges that the personalisation of decision making in Uganda has seen loyal public servants replace competent in-

¹⁷ The words of the President. “I ordered the Minister to sign the oil Agreements”

dividuals, many of whom have refused to delegate significant decision-making responsibilities; factors that have contributed to the ineffective, biased and corrupt nature of administrative institutions (Teja, 2018; Tangri 2010; Booth 2006). Respondents from this study concurred, noting that the executive body's personalisation of resource governance has reduced administrative effectiveness, highlighting the frequent requirement for Presidential approval and the preeminence of loyal technocrats in advisory functions over government departments. A former operator employee noted,

"It's not his mandate, the ministry is responsible for those negotiations. So yeah, I think, despite the fact that any government entity cannot take a decision without his approval. I mean if he says no, there's no way you can move however much you have done. For instance, if you look at when the exploration phase ended, it's coming to about 7 years, but up until now, no single decision has been taken." (27 June 2019)

Survey and interview respondents contended that a notable manifestation of the President's involvement in the oil industry and with regards to local content is the spilling-over of Sino-Ugandan relations into the oil and gas industry. Survey data suggest that CNOOC benefited from preferential arrangements, reflecting China's growing influence over the country as a whole and Uganda's considerable indebtedness to the Chinese state; a number of Ugandan employees and former employees of CNOOC concurred. 60.5% of questionnaire respondents answered, 'Yes' to the question 'Does CNOOC have a preferential arrangement / relationship with the Ugandan government?', whilst only 27.9% answered 'No'. In a follow up question, 48.6% of respondents responded, "Yes" to the question, 'Does this relationship allow CNOOC to flout (disregard / not adhere to) local content requirements?', whilst 31.4% of respondents answered 'No'. Langer et. al. (2020), noted that despite the operators forming a joint venture, they each negotiate their contracts separately and have different access to the President; CNOOC according to their respondent, has best access to the President and "their things get done very fast" (Langer et. al., 2020, p. 119). Whilst hard data are unavailable, it can be noted that CNOOC has previously been the least localised of the operating partners; further investigation would be required to add greater legitimacy to this notion.

Noting political settlement theory, whilst Uganda's elites may be aligned with national development objectives, the ruling coalition has weak implementation capabilities. In general terms, this would suggest that CNOOC is less localised than the other operating partners as the state struggles to implement its local content prescriptions on the operators (CNOOC being the least willing to comply), rather than a result of elite level agreements. I challenge this notion, firstly because of the considerable data collected in this study but also such a discussion should take note of the vast topic that is Sino-Ugandan relations and the leverage that is debt to the Chinese state.

Beyond the proposed preferential arrangements with CNOOC, the data obtained in this study highlight two direct consequences caused by the executive's interference and decision to delay the field development. Respondents firstly point to the impact on business confidence, among all areas of the industry and consequently the industry's ability to employ, train and invest in local content. Secondly, respondents disputed whether the delayed development project has allowed for local content to develop in line with industry requirements, with many noting the considerable opportunity cost of the delay and the number of indigenous suppliers that liquidated or lost interest due to the sector's inactivity. The President's predominance over the institutions of state is very apparent in this area of research and does prompt one to question whether administrative performance would have been improved without executive interference.

7.2.2 Impact of Delayed Development Project on International Business Confidence and Local Content Adoption

Overwhelmingly, interview respondents believe that the executive and the government's lack of responsiveness to the proposed field development project has stifled local content and its development in Uganda. Respondents frequently detailed that fourteen years after the discovery of commercial quantities of oil, there are still no operational oil and gas sites, and as a result, no oilfield service companies or EPC contractors employing and contracting local content. An international consultant shared his observations,

“It was often drawn to my attention that Ghana discovered oil roughly at the same time as Uganda discovered the oil and I believe Ghana is now exporting oil and Uganda's only recently broken ground, I think. So, you do wonder why things take so long.” (11 July 2019)

Meanwhile, a former operator employee in Uganda noted,

“I have to fault our government because it didn't do much when we started this. Look at him, Kenya, they started after and look at where they are now.” (19 June 2019)

As discussed in Chapters 5 and Chapter 6, the employment and contracting of Ugandans and Ugandan companies has fallen greatly in recent years, owing to a lack of activity in the sector. First and foremost, the delay in the field development project has seen local employment by operators remain low following the oil price crash. In 2013, the year following the proposal of the first joint development plan (Tullow Oil, 2013a, p. 6) to the President, 370 nationals were employed by the three operating partners; this had fallen to 168 in 2018. Equally, in 2013 USD 106,439,118 was spent with Ugandan suppliers, in 2018 this figure was USD 14,364,196. Although data provided by the government for 2018/2019 are vague with regards to what is included within it, it is clear that there has been a huge fall in local content developing spending since 2013. The impact of this delay on the operators was reinforced by a senior consultant,

“In the period around 2012, 13, 14, Tullow's shares fell by half because of non-response from Uganda to Tullow's development plans, as far back as that time Tullow put his plans on the table, to go ahead and produce and Uganda did not move to approve.” (20 June 2019)

Furthermore, the continued delay of the development project has also impacted the presence of EPC contractors and oilfield service providers, normally international, in Uganda. Whilst the delay pushes peak employment, expected during the development phase, into the future, a big opportunity cost is the lack of involvement of service providers and EPC contractors in developing local capacity in line with their requirements. It was also noted

that by falling behind East African neighbours, it is possible that EPC contractors and oil field service providers will recruit and train staff from nascent oil industries in Tanzania, Kenya, Mozambique and Madagascar, among others, and elect to take them to future operations in Uganda, further disadvantaging indigenous Ugandan labour. One operator employee noted this occurrence,

“They start their recruitment when the government says “maybe” concerning FID (Final Investment Decision), they all come in, you know, their own pressure to employ, the local content. But when it reaches and the government keeps postponing, it demoralises them also to go with other countries. Like for Schlumberger, they have sub-African recruitment, so if it comes like Uganda, they keep on postponing, next year, next year, next year it goes to other countries to employ” (25 June 2019)

As such, we can see that not only has demand for local content decreased as a result of government policy, but we can also see that businesses have been less available to invest in the development of indigenous capacity as the industry becomes sceptical of future progress. Resultantly, we can observe that the state’s governance and executive intervention have, at its very least, delayed demand for local content, pushing the promised national development further into the future.

7.2.3 Impact of Delayed Development Project on Indigenous Capacity

On the supply-side, a small number of respondents, from varying backgrounds, believe that the government has made a concerted effort to delay the progression of the development project in order to provide more time for local capabilities to develop. It is undoubtedly true that the delay has allowed for more individuals to graduate from tertiary institutions, the same goes for the cumulative number of companies that have declared themselves ready to service the industry. We have also seen the progression of the Kabaale Industrial Park, an initiative to create a supplier base in the Albertine Graben, although this is unlikely to be operational for a few years yet.

Conversely, it was more commonly accepted that the delayed development project has had more negative consequences for indigenous capacity and its development. A number of respondents contended that there was actually fewer competent indigenous service providers now, ready and willing to service the industry, whilst some participants focused on the opportunity cost, contending that even if there has been a small increase in competent suppliers, there has been substantial economic damage sustained by existing and defunct suppliers. In Chapter 6 we observed that many indigenous businesses struggled as a result of the oil price crash and the lack of activity; interview participants highlighted that many local suppliers had borrowed heavily at the beginning of the decade and had not been able to internalise the associated costs and has since liquidated. Furthermore, it was also proposed that as a result of the falling and irregular demand, the appetite to service the oil industry has also diminished; a service provider employee noted,

“The first thing is, is that all decline in the oil prices which occurred in 2014, that slowed down the market in Uganda. Many companies closed operations, drilling companies, service companies, and now the wait, so that kind of killed the interest of people to carry on”
(22 June 2019)

As such, the notion that indigenous capacity has universally benefited from the additional time is not supported in this study. Participants noted that as registration of the potential suppliers for Uganda’s oil and gas sector started in December 2016, it is hard to compare supplier numbers now with the exploration period, however a number of industry figures were confident that many prominent suppliers were no longer operational or looking to service the oil industry. A similar narrative was noted with regards to human capacity. Whilst it is undeniable that more Ugandans have enrolled themselves in vocational or academic courses in recent years, only a very small number have been able to gain experience in a working environment and many former industry employees have since lost their employment due to the sector’s inactivity. It was largely agreed that those with recent and significant experience could still be asset to the industry going forward, however, many would at least require significant retraining, as one former operator commented,

“I mean they were laid off, during downsizing. So they have some experience working with operators but they've taken some time now, they have probably another job. So they would need some retraining but they are competent people” (27 June 2019)

Whilst there is limited hard data to highlight the availability of indigenous capacity across the years, the data collected in this study infers that there are little, if any, benefit from the delay of the development project, with a number of respondents commenting that the costs outweigh any possible benefits. Whether this strategy will bear fruit is not something we will be able to properly assess until the government approves the field development plans and the industry can restart. However, it is clear to see why the President's management of the industry has been so heavily criticised, particularly by this study's respondents, as the strategy has risked the employment of Ugandans and indigenous contracts over the past decade years in favour of graduates and businesses in the next decade.

7.3 'Misgovernance' and its Impact on Local Content and Inclusivity

Akin to other developing economies, the Ugandan government has frequently been the focus of accusations of corruption and misgovernance, and consistently ranks poorly on the annual corruption perception index by Transparency International (Ranking 137th in 2019, of 179; 179th on WGI Corruption Control Index of 209; 119th of 2019 in WGI Rule of Law Ranking). In this study, respondents contended that corrupt practices and misgovernance were greatly hindering the development of inclusive local content, allowing for a small group to benefit disproportionately and reducing opportunities for most Ugandans.

7.3.1. Corruption and Ethnic Politics

Beyond the extralegal involvement of the executive body, respondents delivered considerable criticism at the government's commitment to good resource governance and inclusive local content development. Data gathered in this research brings into question the inclusivity of Uganda's local content objectives. There is evidence to suggest that politically connected elites have personally been able to benefit from the development of the oil industry, using their influence to acquire stakes in the wider industry. 57.1% of respondents

answered ‘Yes’ to ‘Have political elites captured the local content market for their own private gain? Rephrased: do political elites have a monopoly on the Ugandan oil and gas supply chain?’, whilst only 21.4% of respondents answered ‘No’. Elite capture¹⁸ is not an uncommon occurrence in underdeveloped and developing states with weak institutions (Patey 2015; Polus and Tycholiz 2016). There is currently very little hard data to verify these claims in Uganda’s oil industry, however, media reports and scholarly articles, including Muhumuza (2017) contend that Uganda has fallen victim to elite capture. Muhumuza highlights an environment whereby political elites can capitalise on inside-knowledge of industry demands, regulatory requirements of the industry, business connections and substantial wealth.

The above sentiment has also been shared by Tangri & Mwenda (2013) and (Hansen et al. 2014). Tangri & Mwenda (2013) contended that patronage contributes to anxiety about the exploration and production of oil resources and consequently has an adverse effect on the operator and business confidence. A concerned operator employee noted “What do I do if the supplier I have chosen because it is the best company is overruled by the minister and he forces me to use a bad company?” (Hansen et al. 2014, p. 18). This study failed to find specific examples of politicians pressuring operators to use specific Ugandan suppliers, although it was noted that some individuals had been able to circumvent a fair recruitment process as a result of political patronage.

The notion that the industry is not universally accessible was reinforced in the semi-structured interviews, with a considerable number of respondents highlighting the value of elite level connections and ethnic / tribal preference. It was suggested that MPs and high ranking civil servants have significant influence over the hiring of Ugandan staff, noting that some people are only employed because of their political connections. An operator employee concurred, highlighting the existence of political patronage and preferences in the

¹⁸ Elite capture is a form of corruption whereby public resources are biased for the benefit of a few individuals of superior social status in detriment to the welfare of the larger population

recruitment process and how this can permeate into companies, even those without Ugandans in decision-making positions, namely the operators,

“Some positions are all about who knows me and are my friends ministers, like sometimes you just see like if you're in a recruitment HR just sit and you just receive a letter from parliament, telling you to recruit someone” (18 June 2019)

More frequently, however, respondents were keen to point out the challenges of universal representation that exist because of the entrenched nature of ethnic and tribal¹⁹ politics in Uganda, most notably the prominent role of people from the West or the specifically the President's ethnic group, the Banyankole²⁰. Bareebe and Titeca (2013) note that Museveni has faced accusations of promoting and encouraging tribalism and nepotism, providing the following example after the promotion of an officer from outside the favoured region, “having only one General out of six coming from outside the president's person from a region other than the president's to hold such a senior rank. They cannot portray regional balance (Bareebe and Titeca, 2013, p. 43)”; these ratios are mirrored beyond the armed forces. Likewise, the data from this study infers that the President's ethnic group occupies favourable positions inside and out of government and this is largely replicated across the oil and gas sector and its public and private stakeholders. One operator employee made the following comment,

“You see it in paper as everywhere and people talking about it, that people from the West, that people, is areas where the president is from. So where the President is appointing, now he appointed someone from the West, so when he appoints someone from the West that person now has an influence there and that person will also appoint someone from there (...) you will find the majority of people in charge will be from the West because they were appointed by someone.” (20 June 2019)

¹⁹ Nine ethnic groups account for approximately 70% of Uganda's ethnic groups, the largest group being the Buganda. Within each ethnic group, there are numerous tribes (Amerber, 2019). Refer to Chapter 5 for more discussion of the ethnic and tribal makeup of Uganda.

²⁰ While some claim that Museveni is a Muhororo/Tutsi, most Ugandans - including Museveni himself- consider him as a Munyankole (singular of Banyankole) from the Bahima subgroup

Preferencing towards those from Museveni's tribe was a recurring theme of the research, although it is worth noting that a minority of respondents refuted its existence. There is no literature that highlights widespread tribal preferencing within the Ugandan oil and gas industry, although there is a body of literature that supports the uneven distribution of government positions; Bareebe and Titeca (2013) talk of the development of a self-serving oligarchy through the use of patrimonial structures to further the President's personal rule. In noting the existence of these patrimonial structures Bareebe and Titeca (2013, p. 104) highlight the role of Museveni's family and associates across the political spectrum and Ugandan economy, the following occupying roles in the oil industry,

Geoffrey Kamuntu - He owns a procurement firm that does consultancy work for the oil explorers in the Albertine region of Western Uganda. *(He is a son-in-law to Museveni (married to the president's third daughter Diana)).*

Albert Muganga - He is in import/export business and in 2008 his company Kenlloyds Logistics was awarded exclusive rights to manage the country's oil reserves in Jinja. The contract was cancelled after protests from big oil companies like Shell, Caltex and Total. *(He and the President's son Muhoozi married sisters (Ishta and Charlotte respectively), daughters of Foreign Minister Sam Kutesa)*

Whilst most respondents did not refute the predominance of the Banyakole, a number of respondents contended that there is a prevalence of different ethnic groups within different organisations in that business or administrative leaders and managers are likely to recruit and support people from their own group or tribe. One former operator employee noted the role they perceive patronage to play in recruitment in Uganda,

"They advertise but I still believe that as a problem for all Ugandans is that they favour that own. That's the problem for Uganda profile interviews and get people in the right position unless you have some connections"

(...)

“In certain organisations, now move away from oil and gas alone, you will find one group from one area, in another organisations you will find another group from a different area. Depending, as I said from the people who are doing the interview, they will also bring that people.” (27 June 2019)

The prevalence of ethnic or tribal politics and, or, patronage through connections is in itself a challenge to the fabric of transparent and honest governance. Bac (2011) notes that the presence of connected elites reduces transparency during decision making and decreases the probability that corruption or wrongdoing is detected. Interview participants inferred that the favouring of a tribe or peoples from one region was greatly hampering the inclusivity of local content and were concerned that such a patrimonial and nepotistic system would breed more corrupt practices and greater elite capture. Although Uganda’s institutions are not extractive to the degree of Mobutu Sese Seko’s in neighbouring DRC (reference to Acemoglu & Robinson, 2012), these institutions lack the capacity to prevent elite capture in its entirety and promote inclusivity.

7.3.2 Patronage and the Misallocation of Scholarships

The overriding narrative within this section of the research was that there is a select group of well-connected individuals, almost exclusively from the Western region or Buganda who have and continue to benefit from international scholarships. As one operator employee noted, the recipients of these ‘enhancements’ are the ‘who’s who of Uganda’. Data collected from both the questionnaires and the interviews infer that the funding and access to courses has not been distributed fairly among the population, instead respondents highlighted a system which fails to reward those from minority / non-Ankole or Buganda groups. Operating companies have been the main source of international scholarship funding, deductible against future earnings, who, arguably have little cause to involve themselves in ethnic / tribal politics or other forms of patronage; however, this supposed neutrality does not appear consistent with the selection process.

Respondents commonly spoke of the effect of selective scholarships on perpetuating a perennial circle of elitism. A graduate of Makerere University suggested that many of the people already in the industry were not known to them or their classmates, instead they had benefited from scholarships and a western education,

“The list of people who are already in the industry, you keep wondering where they're coming from? But at the end of the day you hear stories of people who were taken abroad, educated from the other side (primarily Europe and the UK) to come and takeover.” (23 June 2019)

A publication from International Alert (2009) highlighted the concerns that some ethnic groups were more likely to benefit from enhancement opportunities and scholarships; it was noted that Banyankole people are disproportionately represented in government and were receiving preferential access to courses related to oil and gas, “rumours are already rife that Banyankole applicants have been given preferential treatment in being admitted to the new technical school being set up for oil experts at Makerere University” (International Alert, 2009). An international consultant reinforced this notion and alluded to the connection between education, training and the cycle of job capture among a certain tribe, the respondent commented,

“Although this year many institutions have been able to access funding (through Private Sector Foundation or Enabel - which is a Ministry of Education fund), we do find a majority of a certain tribe getting the high job position in governmental oil institutions.” (18 June 2019)

Discontent with this matter has also been raised in the Ugandan Parliament and more broadly in the media; MP Florence Ibi commented in the house “the names that are here on the list, which my honourable colleagues printed out, are not from any other part than the Ankole region” (Taken from live parliamentary recording, 21 Sep 2012). As of yet,

there has been no published data which can be used to cross reference this; an international consultant working within the Ugandan government highlighted the apparent lack of transparency in the scholarship selection process,

“Since 2007 all major oil and gas companies in Uganda have continued to take Ugandan students for oil and gas training abroad to countries like UK and Scotland to study specialised oil and gas courses, but no known procedure for choosing such students is known.”

(11 July 2019)

Interview data was also reinforced by survey data from the second questionnaire. 55.8% of respondents agreed that, ‘Sponsored programmes for education and training have fallen to Uganda’s political elite and those connected with them’, whilst only 30.2% of respondents disagreed. Collectively, data from this study infer that sponsored programmes for education and training are unequally distributed amongst the population, furthering the exclusivity of the industry and reducing prospects for many Ugandans. Such a factor is concerning; operators are mandated to develop local content in a fair and inclusive manner, however, appears this is being undermined by corruption and malpractice within the government and civil service. Once again, it appears that institutions lack the capacity and the autonomy to promote inclusivity where possible.

7.4 The Role of the Ugandan State in Local Content Development

Whilst scholars of political economics note that socialism has the capacity to allocate resources effectively, it is widely accepted that free-market economies may not. In this study, we can observe that substantial resources, be it government funding or the time and savings of an individual student, have been inefficiently employed with the objective of developing Ugandan competences in line with the requirements of the oil industry. Aligning Uganda’s vocational and academic institutions with the requirements of the oil industry reflects many years of resource misallocation and market failure. Data from this study

highlights ongoing challenges around education, with respondents almost unanimously citing problems with the adequacy of the curricula being taught and a dearth of accredited courses and institutions.

As the nation had a dearth of relevant capacity in the early 2000s, local capacity development is an integral part of delivering local content objectives. 85.3% of respondents strongly agreed (45.3%) or agreed (40%) that there was very little workforce or supplier capacity in Uganda to support the development of an oil industry when commercial quantities of oil were found. Only 8% of questionnaire respondents disagreed with this statement (none strongly disagreed) and interview respondents were unanimous in agreeing with the fundamental premise that education, training and up-skilling is a necessity in developing a more localised industry. The capacity of the indigenous education systems to deliver for the industry occupies considerable importance in any local content development strategy, a former operating company manager commented,

“If you want to train people then you have a good crop to pick from.” (20 June 2019)

The following subsections explore the governance of education the role of state and private institutions in indigenous capacity development in Uganda’s oil and gas industry. Data from this study highlight widespread shortcomings across the pedagogical spectrum, observing both continued misgovernance and resource misallocation.

7.4.1 Primary and Secondary Education

This study found that, as a result of widespread deficiencies in primary and secondary schooling, the number of students who were appropriately qualified to enrol on oil and gas related courses, both vocational and academic, was greatly reduced. The evidence suggests that the narrowing of the skills pool is very apparent in the Albertine region, where there is a greater dearth of secondary schooling and in turn a dearth of relevantly qualified individuals who can enrol into tertiary education. Although most Ugandan interview participants were complimentary about the condition of the primary and secondary education

system, international respondents were more critical. A manager from a development agency expressed considerable concern,

“It’s a bad educational system, a lack of funding. It went down to be 15%, now we are at 10%, I think, of governmental funding, it’s getting so bad that World Bank is refusing at the moment to go for a new global partnership in education. So that’s really the process, you have to spend for somebody in to be education. Most of the education is paid by actors like, UNICEF, is paying it, World Bank is paying, the government is not investing in education.” (17 June 2019)

In July 2020, the World Bank announced it was providing USD 150 million of funding to Uganda to enhance secondary education in the country, but acknowledged that in 2019/2020, education expenditure as a share of the national budget fell to just 10%, substantially less than the Sub-Saharan Africa average of 16% (World Bank Press Release, 2020). It was indicated that the declining education budget contrasted with the growing number of Ugandans requiring primary and secondary education. The median age of Uganda is 15.9 years, meaning that more than approximately half of the population are expected to be in education, most of them reliant on state schooling. In recent years this has been exacerbated as Uganda has also taken in many refugees from neighbouring countries, predominantly women and children, furthering the burden on the education system. A development agency respondent concurred, noting,

“There’s a lack of teachers and lack of infrastructure or lack of material, lack of modern training techniques. It’s basically in rather bad shape. The worst of the surrounding countries” (11 July 2019)

Furthermore, Uganda’s education system does not have universal reach, international bodies note a low survival rate in the completion of primary education, UNESCO states that only 35.5% students survived to the last grade of primary (UNESCO Data 2016; Ac-

cessed in 2019), substantially below neighbouring and comparable countries in Sub-Saharan Africa²¹. In addition to this, statistics from the Ugandan Ministry of Education and Sport in 2016 show that private secondary institutions vastly outnumber state institutions two to one (approximately 4,000 versus 2,000), such a scenario can only advance inequality between the ‘haves and the have nots’ and raises questions about the standards of education across all these institutions. It is also worth highlighting that Uganda’s high achieving secondary schools are disproportionately located in and around the capital and not in Uganda’s oil rich region, a factor which continues to influence the truly local part of local content (four of the top five schools in the country are based in and around Kampala according to ‘Schools Uganda 2019’). One senior government technical employee made the following comment, noting the variance of secondary school achievement within the country and its effect on sub-national local content,

“You know, in Buliisa, basically, some areas are with quite few secondary schools. The level and levels of people going beyond the O level, the secondary education, are few and when companies, for example, if you open a location and you tell people this is the vocation, the minimum requirement is secondary school, you must have good grades in physics or whatever. Most people will be locked out. (...) With time, people will realise we need to do secondary, at least get a pass in physics to qualify to work with vocation or taking up from this. Then from there I go and do other certification”. (21 June 2019)

As such, we can observe that the earlier stages of education can have a defining outcome on local content and its development as the skills’ pool is narrowed throughout the age groups. In 2012, only 60,000 to 70,000 students graduated from secondary school in Uganda and qualified to go on to university education (Galukande, 2018), a very small proportion of the overall age group. Galukande et. al. states that only 35% of these 60,000 to 70,000 graduates went onto find places in public universities, with the most being absorbed by Makerere University (Galukande et. al. 2018, p. 92). Kasekende, Deputy Governor, Bank of Uganda, (2017) estimates that were around 60,000 students per academic

²¹ Comparable data shows how low this is; Ghana 84.98% (2016), Rwanda 57.06 (2016), Kenya 93% (2014), Tanzania 91.93% (2017), DRC 45.26 (2014)

year enrolled at university, suggesting that most school graduates will be absorbed into private universities. Meanwhile, entry to vocational courses is higher owing to the lower entry requirements and ongoing efforts to improve TVET (Technical and Vocational Education and Training) skills across the country at all age groups. According to Dr Wilfred Nahamya, deputy executive secretary at the Uganda Business and Technical Examination Board, candidates registering for technical and vocational assessments increased from 62,896 in 2016 to 86,342 in 2017 and to approximately 100,000 in 2018 (Agaba, 2019).

A 2018 publication by UNICEF concluded that declining education outcomes, namely the number of students completing school grades and receiving ‘O’ levels, is “strongly correlated with reduced sector spending” (UNICEF, 2018); UNICEF add that of 1.7 million students at P1 (age four-five) only 100,000 complete ‘O’ levels. As such, despite the positivity shown by a number of Ugandan respondents in this study, published data and official reports overwhelmingly corroborate the comments of international respondents who took part in this study. Uganda’s primary and secondary schooling is underfunded, lacking in public (state) institutions at secondary level across the country and as a result places education out of the reach of many individuals. In turn, this means that there is a smaller group of individuals who have the necessary academic attainment to enrol on oil and gas related courses, academic or TVET. The data above highlights that overall enrolment to tertiary education represents a very small proportion of the age group and as such, not only do opportunities for inclusivity decrease, but we can observe a narrower and less diverse talent pool. In underdeveloped nations, underfunding of state activity is widespread, and whilst education represents a primary tool of an interventionist state to raise human capacity and engender future national development, the Ugandan state is underutilising this tool, the impact of which is likely to undermine the inclusivity of formal industries like oil and gas.

7.4.2 Challenges and Misgovernance of Local Content Development in Uganda

Prior to the discovery of commercial quantities of oil, Uganda did not possess a great capacity for education and training, this is highlighted further by its dependence on donor funding for education as noted in Chapter 5. Raising capacity in education and training,

both specific to oil and gas and more general technical skills, was requiring of considerable attention. This study found that the Ugandan government responded very slowly to the requirement to raise indigenous capacity in education and training, failing to put frameworks in place and to equip government agencies with the funding and capacity to undertake their mandates. An international consultant shared his observations,

“I’ve worked in several other countries at a national level, in my experience, Uganda is probably the slowest to respond and adapt to put structures in place to make things happen.” (11 July 2019)

This study noted two main shortcomings with regards to the state’s role in governing and engendering local content development. Firstly, respondents believed that there was a dearth of political will and a lack of preparation in genuinely developing local capacity through education. Secondly, it was found that government institutions were frequently incapacitated and suffered from insufficient technical capacity, to the extent where good initiatives were ineffectively implemented.

Kasozi (2003) and Magara (2009) highlighted the challenges facing Uganda’s territory education system in the light of the expansion of public institutions from the 1990s and early 2000s. The increasing number of universities²² and the expanding university population has required the development of great state and institutional capacity to provide appropriate governance, or as Magara notes “the need for the provision of better management, control and governance of public universities” (Magara, 2009, p. 64). In this study, the data contend that the Government of Uganda had demonstrated little preparedness to develop local capacity in line with the growth of the oil industry. A representative from an academic association supported this notion,

²² Of the 53 universities registered in Uganda in 2021, only one, Makerere University, existed before Museveni came to power in 1986. Nine of them public and 44 private.

“It is possible even to possibly go on the Hansard in parliament and not find any discussion on oil until 2005, previously, before that no mention and that has an effect on, what, for example, the training institutions are focusing on, it has an effect on where government expenditure and investment is going in terms of educational institutions, in terms of human capital development.” (19 June 2019)

Inadequate preparation is not unique to Uganda, Gyampo (2010) comments on inadequate preparation and sequencing in Ghana despite the nation pressing forward with production a decade before Uganda. The depth of discourse in the political arena has greatly affected the timely preparation and planning in the field of education and training. When discussing the role of the government, participants commented, that in some cases, government bodies were and continue to be incapacitated due to a lack of funding and resource, and resultantly could not deliver the required guidance and leadership. Existing literature highlights the under-resourced nature of government bodies with education, the National Council for Higher Education (NCHE), responsible for evaluating national manpower requirements and advising government on policy concerning institutes of higher education (GOU 2001: Article 5) was found to be lacking in adequate professional and technical capacity to carry out its mandate (Ssentamu, 2018). A senior representative from an association of academic and vocational institutions concurred,

“There is no standardised way, even with which curriculum development is approached in Uganda. That is the truth, my brother. We have a National Curriculum Development Centre that is hugely, in my view, incapacitated. It cannot pick up, it cannot keep the pace with the ever evolving nature of the industries as to develop courses and curricula in time.” (26 June 2019)

This notion was well supported throughout the interview data and as such, it was inferred that the government’s ability to raise indigenous capacity has been hampered by unequipped and ill-prepared state institutions. Resultantly, there were no approved oil and gas curricula across Uganda’s institutions, no established standards for vocational education which corresponded to industry requirements and no established capacity for governing local content development when commercial quantities of oil were found and being further

explored. Mwakali and Byaruhanga contended that Makerere University has been offering a Master of Science degree in Geology by coursework and thesis since 1999, however, the programme was started before the discovery of commercial petroleum reserves in the Albertine Graben and did not adequately cover the discipline (Mwakali & Byaruhanga, 2018, p. 12). A respondent concurred,

“Around 1995 to 99, 2000, when I was in the university, there was nothing like oil and gas on the Makerere university curriculum. So, there was not a course, maybe it was, an elective or something course, but at that time, no one had graduated to the level of where someone would get a certificate or diploma or degree in something or oil and gas related.”
(19 June 2019)

As a result, it is no surprise that many prominent Ugandan civil servants within the relevant government departments (Petroleum Authority Uganda, Ministry of Energy and Mineral Development) or the Ugandan National Oil Company were educated overseas in the years prior to resource exploration; senior examples of those educated abroad in the early 2000s include:

Proscovia Nabbanja, Chief Executive Officer at Uganda National Oil Company Limited (UNOC), Imperial College London, MSc Petroleum Geoscience, 2003-2004

Lyoidah Kiconco, Head of Exploration and New Ventures at Uganda National Oil Company Limited (UNOC), University of Cape Town, MSc, Petroleum Geoscience, Petroleum Sedimentology and Stratigraphy, 2004-2005

Josephine Wapakabulo, Inaugural Chief Executive Officer at Uganda National Oil Company Limited (UNOC), Loughborough University, BEng and PhD

Administrative capacity forms an integral part of institutionalist theory of effective governance and in this case study bureaucratic capacity in education is an important vehicle for actualising positive change within academic and vocational institutions themselves. As will be discussed in the following subsection, the study finds that the government's neglect of

its administrative capacity has proven a telling factor in managing the development of tertiary institutions to educate and upskill Ugandans for oil and gas.

7.4.2.1 Public Sector Lethargy in Education and Upskilling

The data gathered infer that a number of promising initiatives to upskill and educate Ugandans have been, and continue to be, ineffectively implemented by the civil service. Some respondents contended that Uganda's administration was still finding its feet and lacked experience and technical knowhow, whilst others were critical of bureaucratic processes and unwilling individuals. A number of interview participants, primarily from the donor community, highlighted the lethargic nature of the public sector in Uganda and noted practical challenges of working with them. Respondents commented on the mis-functioning of the long-awaited Sector Skills Council, a potentially valuable platform for defining requirements, discourse and coordinating efforts in achieving the supposedly shared objective of upskilling Ugandans for the oil industry; an international consultant noted,

"In 2017, that sector skills council (Oil and Gas Sector Skills Council) consisted of mainly or either the oil companies and training providers. Aside from that, there was very little influence or impact from the private sector, so it met very, very irregularly when it met, it was very often a foray (...) Unfortunately it wasn't happening effectively." (11 July 2019)

Many international participants concurred with this sentiment, with a small group highlighting individuals within the civil service who have not been conducive to promoting discourse and the implementation of local content initiatives and interventions. One of these individuals highlighted was the civil servant overseeing the Sector Skills Council for oil and gas; three international respondents specifically noted the challenges of working with the individual in question, notably the frequent cancelling of meetings. More generally, it was

noted that the Ugandan public sector was difficult to work with due to bureaucratic tendencies and ‘institutional lethargy’²³. These obstacles were not only highlighted by international respondents, with a Ugandan industry leader noting the ongoing challenges of working with the Ugandan public sector on local content development topics,

“But now whenever I would go to a meeting, we would go to a meeting to plan for a meeting, to do a meeting for another meeting to organise a meeting. Now I’m from private sector, I don’t get per diem, but they’re getting the per diems for that kind.” (24 June 2019)

In furthering this understanding of why the sector skills council for oil and gas has been largely ineffective, it was noted that private sector involvement (Ugandan enterprise) was lacking and not prioritised. The respondent pointed to the weakness of the private sector, commenting on the myriad of challenges facing the nascent Ugandan suppliers and that many of them were considerably more pressing than industry-wide skills development. An international consultant made the following comments,

“It’s unreasonable to expect that you can set up powerful employer led bodies when the employers are not necessarily there and if they are there, they’re not necessarily interested in engaging in strategic skills development initiatives because they are more interested in trying to get their own companies either off the ground or operating profitably. So even though they recognise that skills development is a big issue, it’s not really an issue where they want to take leadership. So, this was often said to me, in the cases of Uganda can, the private sector is not in a position to take leadership yet.” (11 July 2019)

This issue is largely compounded by the absence of oil field service companies and EPC contractors. The Sector Skills Councils provide the opportunity for strategic skills development to be led by the needs of all employers in the industry, but it is apparent that this opportunity to engage willing and available oil stakeholders is not being utilised by those who preside over it. The operational deficiencies of the Sector Skills Council remove what

²³ Term used by respondents but also noted in the President’s paper, ‘New Vision’

could be a valuable platform for the state to receive guidance on the ongoing requisite skills demand of the industry, which in turn represents valuable information for tertiary institutions, assuming they are capable and willing to act on it.

Focusing on the wider administration of oil in Uganda, a public sector participant contended that there are too many ministries concerning themselves with the development of human capacity for the oil industry, quoting a lack of coordination not only between external partners but also within the civil service and arms of government; namely the Ministry of Labour, the Ministry of Education and Sport and The Ministry of Gender, Labour and Social Development (other departments are still broadly involved, such as the Ministry of Trade, Industry and Cooperatives). It was noted that Uganda sought international partners to assist with the capacity building and curriculum development of two centres of excellence in the Albertine region. An international consultant expressed his surprise as to why it took three and a half to four years to award these contracts; the respondent made the following remarks concerning his experience upon arriving in Uganda,

"They told me that it was being advertised in many, many places. They told me that they'd been on exploratory visits to South Africa and India and places like that in looking for central partners, and they'd been unsuccessful in finding these potential partners. It all ran entirely counter to my experience for example, of working in Saudi Arabia
(...)

(Concerning Uganda when the respondent was contracted to the Ugandan government and led the initiative) And in fact, it never proved to be problem. And we had very, very large numbers institutions from UK, from Ireland, from New Zealand, from Australia or many other countries around the world falling over themselves to be awarded those contracts." (11 July 2019)

Uganda's bureaucracy is susceptible to inefficiency (Yanguas & Bukenya, 2016) and it is clearly inferred from the data collected in this study that the civil service, has not been an efficient vehicle for driving local content initiatives forward. As the supposed leading force behind the development of education and training on a national level, from determining

budgets for state institutions and overseeing curricula implementation, the state's role within this multi-stakeholder environment cannot be understated. This study finds that shortcomings of state's administration of education and training has had a negative impact on the growth of tertiary capacity to cater for oil and gas requirements. In institutionalist theory, bureaucratic performance is considered an integral predeterminant, not only of effective governance, but national development itself. Once again, we can observe that bureaucratic capacity is insufficient in overseeing the development of an educational sector that reflects the oil industry's requirements.

7.4.2.2 Curricula Alignment with Industry Requirements

In the absence of strong guidance and centralised leadership, academic and vocational institutions themselves have had a considerable degree of autonomy over the courses being delivered in their institutions. A consistent narrative throughout the semi-structured interviews suggested that if institutions could prove they had, to a certain degree, the capacity to teach their proposed courses, the government and the relevant institutions such as the National Curriculum Development Centre would not oppose its teaching. Respondents questioned the extent to which existing courses really engage with what is relevant to the oil and gas industry and challenged the forces perpetuating irrelevant teaching; notably the dissemination of primitive and unaligned curricula around Uganda's tertiary institutions and the hiring of teachers immediately following graduation. The latter removing any opportunity for teachers to gain practical work experience or phronesis and for development reflection (Finlay, 2008).

With regards to oil and gas skills' requirements, there is a clear distinction between the role of the universities and the vocational institutes. University courses are expected to deliver an education that is relevant theoretically and practically to the intended role of the graduate in the oil and gas industry. Vocational courses, however, are not necessarily required to be specific to the oil and gas industry; for technical roles, such as civil craftsmen, mechanical technicians, electrical technicians or welders, the industry demands strong technical skills with appropriate accreditation. One former operator employee commented,

“Most skills that are required, that are good skills, they are not oil and gas, just good technical skills. So, again, I think this has kind of frustrated people (...) The skills required in development are basically technical skills that can be applied to any industry. So why are you spending time saying you're looking to create a university for oil and gas?” (reference to the Principal of the Uganda Petroleum Institute, Kigumba reportedly looking to achieve university status) (23 June 2019)

15 years after commercial quantities of oil were discovered in Uganda, very few vocational institutions have reached a position to deliver the accredited vocational learning that meets industry requirements. It is important to note that skills acquired in vocational education institutions, such as carpentry, painting, scaffolding and welding, are most demanded by the industry before oil comes online. An international consultant who oversaw the recent development of TVET institutions commented on the delivery of the workforce development strategy and inferred that the vocational institutions should have been able to respond better to these requirements,

“The workforce development strategy and plan was done with very close collaboration, as I understand that, you know, it predated my involvement, I think it was 2015 and we signed off, but it was all done with very close collaboration with the, at that time, Tullow and the two other major oil companies and they signed off and supported that strategy so that the strategy actually for example, specified appropriate standards and appropriate qualifications to which the providers in Uganda should have been able to respond. But partly that was dependent on getting these international partners (academic and vocational partners) in place in order to help take that forward.” (11 July 2019)

With regards to one specific institution, a number of respondents focused on the development of the Uganda Petroleum Institute, Kigumba (UPIK), which was formed in the Albertine-Graben region to respond to the industry's demand for skilled technical workers. Respondents highlighted an ongoing disagreement between UPIK and Tullow Oil (the main operator at the time) which has endured since the institution's inauguration in February

2009; the OAG report notes “Review of UPIK’s documents indicated that their initial curriculum was designed without involving/consulting the oil companies” (OAG Report, 2015, p. 42). The Observer (2013) noted that the majority of UPIK graduates are unemployable by the oil and gas industry due to lack of quality relevant skills. One of the institute’s first cohorts commented that,

“When I went to UPIK, by that time, Tullow was the biggest operator in our industry. So Tullow, he complained to UPIK and they should just train people in the skills of welding and so on and so forth. Not about oil and gas drilling operation. So that collision has arisen around skills also.” (24 June 2019)

A number of respondents contended that UPIK is still failing to heed the advice of the operators, regardless of the curriculum overhaul, as the institution seeks to gain university status and to become a hub institution for East Africa rather than focusing on the delivery of good technical skills. In contrast to most respondents, an international expert proposed there may be some benefit for such a move, suggesting that the university status will help address the stigma attached to vocational education. Despite the focus on UPIK, respondents believed that the lethargy with which curricula alignment has been addressed is not isolated to this institution alone. A proficient example market failure in Ugandan education revolves around the spread of ineffectual curricula throughout the country’s academic institutions. It is apparent that vocational institutions and some universities have adopted and adapted an early curriculum from UPIK and it has been noted that this now forms the basis of many oil and gas courses around Uganda. Respondents also note that these curricula were complemented further by course materials taken from the internet. A former UPIK student and current university lecturer noted that,

“If you go there (the universities), you see the list of people who have worked for UPIK, it is a big chunk of it. You can go to universities like Kyambogo and you can try to say, okay where did your curriculum come from and you’re going to find that people from UPIK were having a big stake in it. If you go to other private institutions and try to see where did the curriculum come from, you are going to find people from UPIK.” (18 June 2019)

Respondents highlighted that many lecturers in oil and gas courses are recent graduates themselves, either from the same institution or from other institutions such as UPIK. Due to the nature of the industry and a low level of graduate absorption, many cohorts of students, UPIK graduates included, have gone on to seek professions outside of those intended for them, frequently in education with the curricula they were taught as the backbone of their teaching. Resultantly, the shortcoming of UPIK's theoretically dense curricula have permeated across Uganda's tertiary education sector and continue to be taught in other institutions, both vocational and university. The practical element of the pedagogy is still severely lacking as, in many cases, the teachers themselves have not had any substantial 'hands on' experience in the industry or during their studies. An international consultant commented,

"They don't have the staff who are capable of delivering those skills because the way in which teachers in Uganda are recruited is that they are recruiting from the universities as graduates. So, graduated as a mechanical engineer for example, you then do a teacher training course, you are then recruited by one of the training institute. You have no industrial experience, and you have no practical skills. So, you may be a mechanical engineer, but can't actually train anyone in welding because you don't have welding skills yourself. You understand the theory metallurgy, no doubt that metals fuse and all this kind of stuff, but you can't actually do anything with the welding." (26 June 2019)

Worryingly, many institutions have not heeded the advice of fellow stakeholders. Regardless of funding deficiencies or other constraints, Ugandan tertiary institutions continue to deliver courses with limited relevancy to the industry, instead of removing the course from its offerings. Resultantly, we can still observe courses like Oil and Gas Management and Oil and Gas Accounting being offered at UTAMU (Uganda Technology and Management University) and Victoria University respectively (among others), providing an entirely theory-based education in complete contradiction to numerous reports, press releases, the Capacity Needs Analysis and the Industrial Baseline Survey.

Shortcomings in the development of curricula for the future oil and gas workers appear to reflect failures both on the part of the government, its administration and the tertiary institutions themselves. Younger respondents were critical of the education which they received, noting grievances such as excessive course units, many of which were taken from free online resources, a lack of practical attachments and work experience among other factors. Uganda is not alone in its education system could benefit from greater standardisation and regulation; these challenges are consistent across much of sub-Saharan Africa. In channelling an institutionalist and interventionist approach to governance, it is most definitely the case that a more centralised and regulated approach could have seen resources (public finances, student time and money) invested more efficiently in Uganda's tertiary institutions. In the absence of strong sectoral governance, even in a mixed public and private market for tertiary education and training, we can observe a severe misalignment with industry requirements that is only being truly addressed in light of increased donor intervention.

7.4.2.3 Underfunding and Insufficient Practical Learning Facilities in Tertiary Education

This study found that the capacity to deliver courses, regardless of their relevance, was greatly hindered by a dearth in tools, training equipment and facilities primarily due to financing challenges. The notion that Ugandan state institutions are underfunded is well supported in existing literature; NCHE (2011), Ssentamu (2013) and Sejjaaka (2016) note the downward direction of funding per capita. Coupled with the costly nature of establishing and maintaining vocational facilities, here lies another reason as to why both academic and vocational courses have frequently been lacking in practical, hands-on, or laboratory-based elements. An international consultant highlighted this practical challenge,

“They lack the equipment and they lack the materials in order to deliver real skills. So if you come back to this issue that welding for example, how many of those institutions have facilities that are capable of training 6G welders, well probably only UPIK has that, as far as I'm aware. Over and above that, even if they had the equipment and materials that they

need, they don't have the staff who are capable of delivering those skills because the way in which teachers in Uganda are recruited is that they are recruiting from the universities as graduates.” (11 July 2019)

Existing literature proposes that the IMF / World Bank's Structural Adjustment Programmes (SAP) stipulated that the government reduce its support for higher education (Tiberondwa, 1998; Tiberondwa, 2001; Kasozi, 2003), resulting in dire conditions in the early 2000s; the situation was so neglected that of the 1813 established academic teaching posts in Makerere in 2002, only 952 (53%) were filled (Makerere, 2003, p. 6). Mamdani (2006) highlights that vocational programmes began to proliferate, for which universities such as Makerere lacked both space and qualified staff. Consequently, Sejjaaka (2016) believes that decreasing or stagnating government investments into university facilities, following the commercialisation of academic qualifications, has largely been at the expense of practical education. Despite these challenges, respondents contended that universities have embarked on offering courses in oil and gas for which they do not have the resources, both financial and physical, to deliver. A government technical expert in oil and gas, shared his reservations about the readiness of the tertiary sector to deliver relevant courses,

“For example, universities may want to start something, but they don't have funds to buy the necessary equipment or for example, to teach petroleum engineering, you may need specialised laboratories to teach it effectively. So you may find actually, I think there is few universities, they have slowed some course because they lack the capacities, they lack the human capacity and the real infrastructure capacity to start because they want to offer quality and when they look at or do their due diligence around in other universities, they realise they will need a specialised lab to handle this type of work which they don't have, and they have to postpone some of their things” (21 June 2019)

Throughout the interviews, a number of young professionals reaffirmed that their education did not meet their expectations in terms of practical experience, either in a laboratory or workshop environment or through work placements (attachments as often referred to by respondents). Insufficient government funding for public institutions appears to have had a

knock-on effect on tuition fees. It was noted that the cost of university education was comparatively high given the developing nature of the country, although there is a lack of hard evidence from which to compare fees. A recent graduate noted,

“Student enrolling is not a problem, but there are financial problems because the course itself is expensive because now tuition alone is 1.3 million (UGX) (Approximately 270 USD per semester, Bachelor’s Degree, Makerere University)” (23 June 2019)

Desk research highlights that 1.3 million UGX per semester is one of the lowest in Uganda for a public university education and is substantially cheaper than the private institutions. This data further reinforces the notion discussed in section 3.2 of this chapter, that education, training and ‘enhancements’ are not universally accessible to all Ugandans; taking the above example, we can see that the fees for one academic year (two-semesters) accounts for 87% Ugandan GNI per capita (USD 620 in 2018, Source: The World Bank Data Bank).

Institutions cooperating with development partners and other stakeholders have been able to overcome these financial challenges more effectively. Institutions such as Sunmaker Oil & Gas Training Institute with Chinese backing, and UPIK with the support of GIZ and the World Bank through Employment and Skills for Eastern Africa (and relations with partner institutions, Rogaland Training and Education Centre (RKK) and the Stavanger Offshore Technical College), are able to cater accurately for the demands of the industry as they have been able to invest in relevant training equipment. Whilst UPIK’s development into an accredited institution has not been alacritous, its achievements have been vastly greater than any other Ugandan institution broadly serving the oil and gas industry.

As highlighted by Mwakali and Byaruhanga (2018, 2020), vocational and practical elements of any education increase the unit cost per students. Resultantly the decreasing or stagnating funding for tertiary education goes against the oil industry’s requirement for courses with greater practical relevance. In light of these challenges noted above, it is hardly surprising that a great number of academic degrees are considered by this study’s

respondents to be largely irrelevant and that so few vocational institutions have been accredited by an international awarding body in oil and gas, a minimum requirement for any graduate wishing to use his or her skills in this risk averse oil and gas industry. As highlighted in Chapter 5 and 6, donor intervention, notably with industry guidance, appears to be the key determinant in whether an institution can overcome funding challenges and truly become a pocket of effectiveness, filling a substantial void in the absence indigenous bureaucratic and technical capacity and funding.

7.4.2.4 The Long Road to Accreditation

Whilst the relevance of the curricula is the primary hurdle for many institutions, accreditation also presents a formidable challenge, especially for those not connected with donors or international partners. Whilst, accreditation and quality assurance have emerged as an important tool in education (Romanowski, 2017), reflecting the commodification and standardisation of academic and vocational achievement and correcting the market failures associated with laissez-faire liberalism, the oil industry demands specific standards of its own. Oil and gas is one of the most safety conscious and risk averse industries in the world, perhaps only second to aviation. Incidents in living memory, including Macondo, Deepwater Horizon, Piper Alpha and the Exxon Valdez Oil Spill, resulted in considerable loss of life, environmental damage and monumental costs to business. As such, uncompromisingly high standards must be maintained throughout the cycle of oil and gas projects, and accreditation and certification plays a major part in ensuring that personnel, both entering the industry and those already in it, are capable of carrying out the work required of them. In Uganda, although many cohorts of students have graduated over the past decade from TVET institutions and universities, very few of them have graduated with the certification which permits them to work either at the rig-site or carry out their technical roles across the oil and gas value chain in accordance with international industry standards. One senior government official commented,

“You’ve got to push for employing nationals but if you don’t have a responsible person it, there’s no point. All the gas industry is not going to lower its standards in order to employ.

One of the studies, the industrial baseline studies clearly brought out the fact that Uganda is not very strong in the area of certified technicians' skills" ²⁴ (20 June 2019)

A fellow senior government employee concurred,

"Much as they may have requisite diplomas, mechanical, electrical, or whatever, the actual, actual permitting issues, which will allow them for example, to work at the rig-site, they don't have them. They have never done HSE certification which is mandatory" (25 June 2019)

Health and safety certification, virtual and practical learning and student exposure to working at the rig-site remains a considerable challenge. As the senior government employee noted above, without the requisite certification, it is impossible for a graduate to pursue non-office work without additional post-graduate training, placing the burden of certification on the operators or the industry itself. During the interview process, it was clear that very few graduates had been made aware of certifications required during their education, both vocational and academic learning, potentially as their institutions are not able to offer the relevant accreditation. Many local students were also unaware of free online courses such as the International Well Control Forum, Level One certification (an introductory course into the basics of HSE at the well-site), perhaps demonstrating that Ugandan institutions have not fully comprehended the importance of accreditation and certification, even at entry level²⁵. In contrast, an operator employee who was educated in China shared their experience, seemingly demonstrating a closer link between the Chinese NOC and Chinese tertiary education than we can observe in Uganda,

"They did tell us, all the accreditations have sections within the coursework because when you did well-control, they would say, without the certificate, you can't be on the rig, you

²⁴ N.B. Reports vary on the number of certified technicians, an NTV article quotes a government representative noting that over 1000 certified technicians had graduated (14th Nov 2020), whilst Robert Kasande, the Permanent Secretary at the Ministry of Energy and Mineral Development (MEMD) is quoted in [busiweek.com](https://www.busiweek.com) noting 2000 certified technicians (14th Feb 2020) - also published by Q-Sourcing Servtec Group. As such it must be assumed that not all the 12,020 Ugandans registered as of November 2019 on the National Oil and Gas Talent Register are certified technicians (New Vision, 2019). These figures must be compared against the 13,000 jobs expected to be created indirectly by the industry, 65% at least will be technical.

²⁵ As a note, I was informed that CNOOC Uganda are now advising their staff to enrol on this online course

need to take it also when I got an opportunity to work, I said, I needed to do this.” (23 June 2019)

For the industry as a whole, the biggest challenges lie on the vocational side of education. Whilst the government of Uganda has accredited a number of vocational institutions for oil and gas in Uganda, it is international accreditation which is required by the operators, oil-field service companies and the EPC contractors. The requisite accreditation or certification is often beyond the financial capabilities of the Ugandan institutions, regardless of whether they have the capacity to meet the required standards. A number of government respondents also noted their doubts that indigenous vocational and training institutes would ever be able to provide for the whole industry, highlighting the substantial financial costs of developing training facilities to cater future refinery activity in line with international standards. Two international respondents made the following comments,

“You need an international certification system, but this is very expensive” (17 June 2019)

“Most of the institutions in Uganda are actually incapable of meeting the standards required by City and Guilds, by ECITB” (11 July 2019)

Uganda’s problems with regards to accreditation are further exacerbated by the fact that the operators do not share the same criteria in terms of accreditation and certification. As such, an institution which wishes to cater for the whole industry would require considerable financial outlay in order to reach the standards required by multiple awarding bodies. Whilst not impossible, it highlights a further complication and challenge for indigenous institutions in maximising their courses’ relevancy to the industry. Foreign and multinational organisations offering training in Uganda are naturally more advanced, SeaOwl delivers a number of internationally recognised certifications whilst the Chinese training provider, Sunmaker Energy, can deliver internationally accredited training, including IADC, IWCF, City and Guilds, NEBOSH, OPITO, ISO and AWS.

The role of the international development community through organisations such as the World Bank, GIZ and Enabel has revolved around working with indigenous partners and represents an area of real progress with regards to aligning education and training with industry requirements. As such, it would be true to say that no indigenous institution has successfully been accredited by an international awarding body thus far without the assistance of a development partner, further underlining the shortcomings of Ugandan government policy and intervention. These findings also reinforce the challenges that face a nascent hydrocarbon nation, particularly in an underdeveloped economy, in the context of achieving self-imposed localisation objectives.

7.5 Market Forces and Market Failure in Private Education

This study found that misalignment between academic offerings and industry requirements is most apparent within private universities and vocational institutions. The growth of private universities is a recent development in Sub-Saharan Africa, only emerging in the 1990s following the implementation of neoliberal policies (SAP induced) and the economic crisis of the 1980s, which led to major reductions in funding for public universities (Banya, 2001; UNESCO, 2001). As of 2021, there were 44 private universities in Uganda, almost five times more than public universities (nine), many of whom have sought to offer courses, that to some degree, cater for the oil and gas industry.

Owing partially to the lack of central guidance on curriculum development, private institutions have, in many cases, taken a further degree of autonomy in creating courses which supposedly deliver industry relevant courses. The private nature of Uganda's universities and vocational institutions brings about a new dimension when exploring the discrepancies between industry requirements and the curricula being taught. A number of respondents asserted that the commercial nature of these private institutions perpetuated a practice whereby aligning curricula with industry needs is not necessarily a priority as long as the institution is still able to attract paying students. As noted previously, some curricula stem from the original UPIK courses, whilst a number of respondents also noted that they

were aware of courses that had simply been taken from the internet. A young professional and association member made the following comment,

“This is one thing I raised constantly when, when I was an active board member in the SPE. I raised concerns about it because most of the universities are private. So it’s a money making venture. So that alone has negative consequences. And the education system, we have all these private institutions offering all sorts of courses. I’ve seen the courses, advertising courses in oil and gas. So I asked myself now courses like, Oil and Gas Logistics, Oil and Gas Management. No! I’m like how many managers are we going to have? So like I said it’s a big problem. These are private entities that just exist for business. They’re trying to make money, but they’re not really building anything for the country in terms of local content” (18 June 2019)

Existing literature highlights the challenges associated with the preeminence and growth of private institutions across sub-Saharan Africa. Ochwa-Echel (2016) notes the warnings of the director of the United Nations African Institute for Economic Development and Planning who stated that “the growth of the private universities was eroding universities’ role in the advancement of the continent since it was/is promoting private gain as opposed to public purposes” (Ochwa-Echel, 2016 p. 11). In furthering this, respondents from this study were critical of the role of private Ugandan institutions in looking to profit from the oil industry, most agreeing that their contributions to educating and training Ugandans have been minimal. A technical oil professional in government employment made the following assessment,

“The oil sector is interesting to everybody. So when a college or university comes up with a course, Oil and Gas Management or whatever, people just jump onboard. After graduating, they realise the chances are very few (...) private universities as long as they prove to the National Council of Higher Education that they have the capacity to offer that course, I don’t think they can stop them (...) like I told you they don’t have the facilities which must be in place for, especially for practical courses, to be taught effectively, but of course people can enroll because they don’t know” (21 June 2019)

Whilst the relevancy of courses is one side to the problem, the other side is that the potential students are unaware that the course they are enrolling on is unlikely to improve their career prospects; this is also a familiar challenge in other countries across the continent, Zakaria and Alhassan (2018) discuss awareness of post-graduation employability in Ghana. Potential students struggle to verify the quality of the courses as information of university standards and rankings, let alone courses standards, as this information is not readily available in Uganda. Despite the limitations in terms of alignment, practicality and employment prospects, tuitions fees for academic and vocational courses in Uganda are often many times the average yearly salary; for example, an MBA course in Oil and Gas Management will cost the student \$3900 (USD) at the Virtual University of Uganda, approximately six times the nation's GDP per capita.

As Hayek (1945) shows in "The Use of Knowledge in Society," knowledge never exists as a coherent whole. Correspondingly, in this case study, we can observe that students do not have universal access to information, which in turn leads them to enroll on courses which do not have the capacity to meet their expectations. In this case study, the market's allocation of resources is ineffectual and fails to reflect the needs of the industry whilst depriving students of a genuinely valuable education and their savings at a pivotal and career defining age. Mkandawire (2001) notes that an interventionist approach is often appropriate for market failure such as this. In my study, the data infer that most private institutions are not motivated by the public good, in many cases providing an education that limited value as there are few career opportunities in the oil and gas industry for poorly skilled graduates. To this end, an operator employee shared his perspectives, noting that, in many cases, any perceived connections between institutions and other stakeholders are not part of a genuine attempt to align courses with oil and gas requirements. Instead, their objective is to bypass curricula development whilst appearing to be a credible institution for potential students. The respondent made the following comments,

"Most of these institutions see it like a marketing strategy for them (...) they are not so much into contact with the stakeholders because all that they need is that if I advertise for

maybe machines, automatically people come to my institution and give me money. They are just advertising what they do at the end of the day. There's no connection between the two" (20 June 2019)

The same respondent noted that out of 500 university graduates, it is likely that only 10 are taken into employment by the industry each year, although no published data is available to support this. As such, some respondents went as far to suggest that education was being mis-sold (although not unique to Uganda (Inderst & Ottaviani, 2009)) as the courses being taught, by their very existence at least, create an unwarranted sense of hope that students may kickstart their career in the oil and gas industry by enrolling. A former operator employee and now leading figure in local capacity development noted how these academic institutions in Uganda are profiting by delivering a false sense of hope,

'It's quite shocking and sad, whenever I see adverts in the press by some of these universities, 'Oil and Gas Law Masters' and then I'm thinking why? Because you're selling this hope to these guys and ultimately, they won't be needed by the industry. That is less than 1% of the needed manpower which manpower is already full right now. But just like anything, you know our country's quite interesting because everything is driven, or everything rides on hope" (24 June 2019)

Whilst accepting that many of the private institutions still have a way to go in terms of aligning courses with industry requirements and being aware of the criticism from the oil and gas industry, a senior representative from an association of academic and vocational institutions made assurances that courses are not being mis-sold, noting that there are no career guarantees made by private institutions. According to a senior government official, the screw is finally being tightened on the private institutions, ensuring some level of compliance,

"Now the private players, the challenge they are facing is regulation; the Minister of Education wants to regulate, and they are still not very well aligned" (22 June 2019)

Whether the government and the civil service have the capacity to implement this objective remains debatable. Many interview participants contended that any attempt to address this misalignment is too late, as many cohorts of students have now graduated from these institutions without the skills and certifications required by the oil and gas industry, regardless of whether these skills are supposedly technical or universal in nature. Even in a market dominated by private actors, a dynamic or developmental state should look to address the aforementioned market imperfections and failures, as well as human capital challenges (Mkandawire, 2001), be it through regulation or even playing a greater role in informing students about their choices in further education. This notion that greater interventionism can correct market failure is central to institutionalist theory.

7.6 Public Perception of Vocational Education and Graduate Unemployment

In following on from the theme of market forces, we can observe that there has been greater demand for a university education in Uganda, rather than a vocational one. This is not isolated to just the oil industry or Uganda. Ali (2007), in an African Union report, noted that vocational education suffers from poor perception across the African continent and this study reinforces that notion. In Uganda, many students and their parents prefer the university pathway and the promise of a 'better' career, although there is evidence that vocational education is becoming more popular (note vocational enrolment in section 7.4.1). A senior government official commented,

"If you tell a parent to take his child to become a scaffolder after Senior 4, they'll say, 'Hell no!' So, what we are seeing today, from your previous things, is that we're supposed to have young welders, people in their 16 and 15 but we now see people in their 35s. Now, these are people who have got degrees or diplomas and they've failed to get work for some reason and now they return (to education or training)." (27 June 2019)

Such sentiment was universally acknowledged, a Ugandan consultant noted,

“Ugandans are very anti-blue-collar skills things. It is only until recently people pushing, people pushing and their responses in terms of pay for these people. But it is just an attitude of Ugandans. Everybody wanted to go to higher education and come out wearing graduation garments to the extent that today even kids graduate out of nursery school and they are formal functions, for graduation. So it’s mainly an attitude thing.” (24 June 2019)

Despite Uganda’s poor socio-economic environment, blue-collar work is almost considered to be disreputable among this survey’s respondents; although it should be noted that most respondents represented a comparatively wealthy class, one that is financially fortunate enough to pay for a tertiary education. Moreover, despite the prevalence of agricultural work as the nation’s greatest income source, it was inferred by senior government employees that people from agricultural backgrounds, typically labour-intensive work, still do not perceive blue-collar work as a suitable career path. As such, many young men and women have chosen to pursue courses such as Geology & Petroleum Studies, Petroleum Geoscience and Production, Oil and Gas Management and Oil and Gas Accounting, despite the increasingly apparent reality is that there are relatively few opportunities in Uganda’s oil industry for those pursuing these universities degrees and regardless of whether these degrees are not wholly, if at all, aligned with industry requirements. With regards to oil and gas industry in Uganda, the perception that following a university education will deliver better career prospects is often misled.

Vocational education and training has been accepted as one of the chief means of providing young people with the necessary skills, the underlying assumption being that the major deterrent to employment is a lack of skills (Okwuanaso, 1985). Despite this, very few Africa nations have been able to fund its development. In Uganda, it is clear that vocational training for the oil and gas industry is starting to be prioritised in recent years, however, as noted by an international consultant, addressing the stigma is still a major issue, which in turn explains why UPIK is looking to looking to achieve university status. The consultant noted that whilst awarding university degrees for technical courses may not be the way forward, if those learners could progress from TVET qualifications to more academic routes, it could be a useful construct,

“Offering technical students’ progression to degrees would help to address the stigma issue.” (11 July 2019)

Reflecting the market failure paradigm of laissez-faire liberalism, it is apparent that demand for university degrees in oil and gas is frequently misled, as the career opportunities for graduates are substantially less than those enrolling on a good vocational course. As highlighted by institutionalist theorists Mises (1920) and Hayek (1945), actors are not omniscient and will often make decisions based on their ignorance; arguably in an underdeveloped nation, actors are likely to be even less informed as information is less readily available and internet usage is not universal. Seemingly, considerable work needs to be done in order to, not only attract people toward vocational and technical courses, but also to ensure that students are not drawn towards degrees which deliver very little for their career progression. As Mwakali and Byaruhanga (2020) contend, the population needs to be continually sensitised to the importance of technical and vocational education in order to attract first-class students and not just leftovers from academic routes and failed university applicants. With regards to industry requirements, considerably greater numbers of technical graduates are needed for the industry to move forward in a truly localised fashion (as noted in section 7.4.2.4).

7.6.1 Graduate Unemployment and Retraining

Largely as a result of the factors listed above, many cohorts of students have graduated over the last decade and many have never worked in the oil and gas industry; one factor is the delayed field development, another factor is that graduates simply did not have the correct capabilities for the industry they wished to work in. Resultantly, many graduates have taken different career paths and respondents were unsure as to whether they could be an asset to Uganda’s oil and gas industry when the development phase begins. An operator employee commented that the absorption level has been very low following the industry’s stalemate and continues to be,

“After that (reference to the slowdown and oil price crash) out of the 500 (graduates) like 10 will be absorbed by these companies. So where will the others go, as trainees, not as employees or internships, not on permanent and then they do 6 months and have to apply for a job elsewhere.” (23 June 2019)

Having examined UIA records, it is apparent that these low levels of absorption reflect a general trend within the economy, although levels in the oil and gas industry are considerably more concerning. The Uganda Investment Authority indicates that on average only about 113,000 of the 400,000 graduates who enter the labour market annually are absorbed across all industries. As absorption in the oil and gas industry is so poor, many young professionals have pursued careers in mining and water resource management, a number have even entered the teaching profession, educating students in the sphere of oil and gas, despite having no practical experience themselves. A respondent commented,

“We saw graduates now taking a different direction. Mostly to mining, hydrogen, the groundwater. So there are few graduates in the petroleum sector and the local content there is quite limited out from that.” (21 June 2019)

Whilst many may not harbour any intentions of returning to the oil and gas industry, those that do are likely to be severely lacking in experience, and their academic learning beyond retention. Because of this, significant retraining would be required in order for the individual to be competent in an oil and gas role, although some transferable skills, such as those in HSE, may remain wholly relevant across other industries where oil and gas graduates have found work. The same oversupply of labour is reflected in internships and summer placements for students, one former student supported this notion,

“Usually you have internships where you get yourself like practical work and join the industry, they take you to the field in Hoima or other places. They'll be a few people chosen for the company and then the rest will remain doing like soft-work. I myself, I didn't get the chance to like join the company. We only had three of them, CNOOC, Tullow and Total,

so only few, like five people, like out of the class of 60 people (were taken on for internships).” (23 June 2019)

As such, this study contends that there is a misallocation of resources within education and training and the very fact that graduates are struggling to find roles post-graduation and placements during their studies is indicative of the challenges being faced. The reality is that of the 13,000 or so direct and indirect jobs promised by the Industrial Baseline Survey, very few of the roles are yet to be recognised as a result of the delayed development project. Whilst technical graduates can be absorbed into the wider economy, those with an education more specific to oil and gas may lose competence without the requisite experience in the industry. In light of the increasing number of vocational graduates from accredited courses and the expectation that the industry will restart soon, there is hope that this disequilibrium of labour supply and demand will experience some degree of a correction.

7.7 Conclusion

This study found that, despite numerous prophetic examples, Uganda’s resource governance has not been conducive to the timely development of local content and its adoption. The need for greater state intervention, not only regulation, is in part, owing to the histories of other oil rich states on the continent, many of whom adopted a laissez-faire approach to the sector’s development, allowing for the creation of economic enclaves (Hansen, 2014) with few linkages to the indigenous economy. In this case study, the data suggest that governmental and institutional failings have not only restricted the industry’s growth but also restricted the industry’s inclusivity, noting the perpetuating cycle of preferential academic enrolment, profitable careers and business opportunities. It was noted that those without connections and those not from the prominent ethnic groups are less likely to experience such benefits and opportunities.

Data collected through the semi-structured interviews highlighted that government lethargy, be it the lengthy delay in approving the development project or a lack of leadership in aligning indigenous education and training with oil and gas requirements, has inhibited

local capacity development. Respondents contended that a lack of political will appears to have pervaded the government institutions responsible for overseeing local content and its development. More precisely however, this study found bureaucratic and administrative capacity to be lacking, despite Uganda's well-established bureaucratic traditions. Arms of government have been found to be underfunded, understaffed and lacking in the resources required to engender positive change across the industry; be that monitoring the implementation of regulation or creating centres of academic or vocational excellence.

Whilst many respondents were critical of the government for the often-incapacitated nature of its administration and funding problems across tertiary education, the ongoing creation and teaching of largely irrelevant courses provoked a good number of respondents to question the competence and motives of academic and vocational institutions alike. Private institutions have been no more successful in reacting to the requirements laid out in numerous reports, including the Industrial Baseline Survey. It was inferred throughout the research that the private and commercial nature of some institutions has perpetuated the teaching of largely irrelevant oil and gas courses, meaning that many Ugandans graduate from comparatively expensive courses with minimal skills or relevance. As a result of the above factors, movement towards the widespread development of requisite skills has been sedate, largely undermining the notion that the Ugandan government has intentionally delayed the development project in order to allow local content more time to develop.

Uganda's role in localising the oil and gas industry is defined beyond regulation and its management of the development project but by its capacity to create local content through sound governance and leadership. It is clear that much more could have been done in order to develop local content, both proactively in the early years and reactively following the Industrial Baseline Survey and similar reports. The biggest losers are not the future employers such as the operators or EPC contracts, but arguably the Ugandans themselves who have looked to pursue a career in oil and gas. Only a small percentage of graduates have been absorbed into the industry thus far, for many, the industry has been a white elephant. Whilst the often-inadequate nature of their education, training, practical experience and the availability of internships has been one reason for this, we can also observe

an oversubscription towards non-vocational education which itself is in contrast to the industry's well-publicised requirement for good technical skills. In reference to institutionalist theory, it is clear that the disequilibrium that exists between the supply and demand of labour has been requiring of more dynamic and proactive government intervention.

In recent years, substantial progress towards a more aligned education and training sector has been made with donor assistance. Respondents found it difficult to attribute much, if even half, of this movement to the Ugandan government or the institutions themselves although there is definitely a degree of indigenous foundation legacy. Resultantly, one could conclude that factors relating to the political economy of Uganda have actually hindered rather than helped the development of local content, with the aforementioned challenges being responsible for a dearth of real, Ugandan led, progress.

This study contends that academic and vocational capacity would be very limited and unaligned with industry requirements without donor interventions. More than a decade since oil and gas was found to be commercially viable in Uganda, the realisation of a localised industry is still severely hampered by a lack of academic and vocational education capacity and an uncertain business environment. Dynamic state involvement, resembling a more developmental approach, has been and continues to be a missing ingredient in Uganda's local content story.

Chapter 8: Discussion and Conclusion

This research, through a single case study, sought to address a number of questions related to local content, its adoption and development in an environment characterised by lower oil prices. This chapter summarises the findings from the three main research chapters and then provides further interpretation and assesses the implications. The chapter also looks at the limitations of the research, addresses the ability of this study to inform future state and private sector decision-making as well as the generalisability of the findings to other countries.

8.1. Summary of Research Findings

Research Finding 1: The oil price crash has encouraged operators in Uganda to adopt a more localised business model, particularly within Tullow and Total, whilst the changes at CNOOC, the Chinese NOC, were more subtle

Corresponds to research question 1: Is there a new operating environment driving the development of a more localised operating model and can we isolate a turning point for operators in the adoption of a localised business model?

Whilst lower revenues are one part of the lower oil price environment, increased pressure from indigenous communities and the government to replace its share of oil revenue with backward linkages is another factor. As such, the oil price crash cannot be viewed purely by its immediate impact. Oil prices have remained below 2014 levels since prices nadired in 2016; correspondingly evidence suggests that government and community expectations for local content have become heightened in the context of reduced potential for oil rents. As noted above, and in line with this study's hypothesis, the data demonstrate that there have been movements, albeit incremental, towards more localised operations in Uganda. We can observe that operators, some more than others, have improved local content adoption and are increasingly engaged with broad-based local content development. There are clear distinctions between corporations; Tullow, a company with a reputation for operating 'more locally' than other operators, has consolidated its commitment to local

content in Uganda, moving to a position where most employees and procurement, in the current maintenance state, is indigenous. Total, an IOC with a global presence and traditionally, risk-averse operating model, has also moved to a slightly more localised position and seemingly plays an active role in important, broad-based local content initiatives. The data also show CNOOC becoming more localised, greater local employment, improved procurement from indigenous suppliers at a maintenance level and through another Chinese company, Sunmaker Oil and Gas Training Institute, a commitment to broad-based local content development, albeit with commercial intent. However, the above developments come with the caveat that more could have been done and the movements observed are significant but not substantial.

Identifying a turning point is not made easy by the existence of other pressures (as discussed in Chapter 6, Section 3) that can influence local content adoption and its development. However, it appears clear from the research that the oil price crash of 2014 engendered a significant and immediate reaction from operators, causing them to greatly reduce the number of expensive expatriate staff. In the years following, we can observe a continuing movement towards a more localised workforce, including a significant increase in the number of local staff in 2019. Such an immediate response was not observed in procurement, although in 2019 we do see a clear effort to localise procurement at maintenance level. And despite an immediate fall in local content development spending following the oil price crash, recent operator involvement in broad-based local content development has gone beyond the traditional remit of the operator community.

Research Finding 2: The emergence of a multi-stakeholder environment in the development of local content, largely characterised by the evolution of operators and donors into substantial contributors to indigenous capacity development

Corresponds to research question 2: What role are the leading stakeholders playing in local content development and adoption in Uganda and does the elaboration of this model differ between key corporations in the oil sector and other stakeholders in the local content landscape?

This thesis proposed that there was insufficient knowledge about the roles of organisations in the multi-stakeholder environment which now characterises local content and its development in oil and gas industries. As highlighted by the Industrial Baseline Survey (2013) and the Capacity Needs Analysis (2016), the industry requires inputs that are diverse in nature. Many of these inputs, both human and supplier, require substantial certifications as well as academic and vocational accreditations which are not readily available in an underdeveloped or nascent oil industry. Correspondingly, developing the requisite indigenous capacity to support the operations of oil and gas companies, international oil-field service providers, EPC contractors and the industry as a whole has necessitated the participation of international partners with the relevant experience and funding to develop Ugandan capacity.

The increasing role of the operators in developing local content was noted under “Research Finding 1”. However, despite greater adoption of local content on the whole, there are underlying factors that define the companies’ attitude to local content (as discussed in Chapter 5); many of these factors remain and still account for variations in commitment. It is clear that Tullow’s model is more localised and is resultantly most “available” and willing to support local content development. Total, more globalised in its approach to operating, has involved themselves with E4D/SOGA project but has not been universally proactive, even blocking the Getenergy Field Ready project in Uganda since the oil price crash. CNOOC, with a commitment to Chinese employment and procurement as part of their mandate is seemingly the least active in local content development. Collectively, the operators have sponsored and provided further education and training for their own staff as well as providing scholarships for the further education of government staff and promising graduates. Increasingly operators are also playing a part in the development of broader, largely vocational, competencies, through alignment with donor-led interventions, which will be utilised in the wider supply chain.

Whilst the progression of operators to become active participants in broad-based local content development is an important development, increasingly relevant donor interventions have been integral to actualising Ugandan state objectives. International donors have been major contributors to education and vocational training in Uganda for decades, however, as demonstrated in this study, it is only recently that we can observe interventions becoming increasingly aligned with the oil industry's requirements, supposedly mirroring developments in other key sectors in which donors are engaging. Donor interventions have aided the delivery of pockets of effectiveness, such as UPIK, and continue to play an important role in the provision of scholarships, particularly for technical and vocational skills, a factor that should enhance the inclusivity of the oil industry, albeit below managerial levels. More broadly we can also observe the running of workshops for Ugandan suppliers, such as those funded by the AfDB.

International EPC contractors and oilfield service companies will be the largest employers in Uganda during the development and production phases of the oil and gas project lifecycle. Resultantly, these companies are best placed to indicate their future requirement for skills and procurement as well as the requisite standards and certifications. However, as a result of the uncertain business environment, future contractors have not been consistently present in Uganda. Consequently, these companies have only been able to provide guidance from afar, as we can observe from the engagement of an EPC contractor with the World Bank and UPIK in aligning vocational courses with future industry requirements. It did appear that if these companies had a greater presence in Uganda, they would have been keenly involved in local content development.

Donor intervention and greater operator application is only necessary in light of state incapacity and inadequate state intervention in developing local capacity. As many underdeveloped and nascent hydrocarbon economies have struggled to achieve satisfactory levels of local content in their own country, it should perhaps come as no surprise that Uganda's local content journey has not been smooth. Nevertheless, the government appears to have positive intentions for its oil wealth. There are very strong narratives that have come from the President and the government to suggest that Uganda is extremely

committed to local content and its development, supposedly furthered by Uganda's decision not to rush towards production, leaving substantial time for local content to develop in line with industry requirements. One positive intervention, albeit slightly removed from the development of local content itself and funded with a loan from the British Government, is the building of an enterprise park in Kabaale; despite being substantially overdue, the business park is likely to be an essential base for indigenous enterprise.

However, the research also shows us that the role of the Ugandan state has been limited in truly engendering the development of local content. The true impact of the delayed development project is currently unknown, although the argument that Ugandan companies and people have had more time to prepare is largely undermined by the notion that many former indigenous suppliers and oil and gas workers have either gone out of business or lost their jobs in the industry. We can also observe that institutional capacity has severely hampered the positive involvement of the state in local content and its development. Museveni's administration has embarked on a number of positive interventions, such as the founding of UPIK in 2009, however, turning the interventions into pockets of effectiveness has proven more challenging. For example, UPIK has been the beneficiary of multiple donor projects with greater engagement with the operators than most vocational institutions, however, it is only recently that the institution has become truly relevant to the industry it looks to serve. Beyond purely being incapacitated, Uganda's governmental institutions do not appear to be truly disconnected with politics, as we see from the supposed preferential treatment given to certain ethnic groups in the awarding of international scholarships. Collectively these factors have made Uganda reliant on donor interventions in delivering pockets of effectiveness and other stakeholders in providing scholarships and funding further education and training.

Research Finding 3: Insufficient bureaucratic capacity in Uganda has prevented the state from playing a proactive and interventionist role in local content and its development

Corresponds to research question 3: What role does the political economy of Uganda play in the realisation of local content objectives?

As noted above, Uganda's governance of the sector appears strongly aligned with the objective of ensuring substantial Ugandan participation. Unlike Ghana, the Ugandan state did not sanction the immediate production of oil and gas, allowing time for administrative frameworks to be put in place and indigenous capacity to develop; although most would agree that the pace at which the industry is progressing is undesirably slow. Uganda's administrative framework (based on the so-called Norwegian Model), enforcing local content within regulations, licences and now legalisation and a few dynamic interventions (such as the founding of UPIK) over the last 15 years are examples of this commitment.

However, in line with institutionalist theory, notably seminal work of Acemoglu and Robinson (2012), this research found the lack of bureaucratic capacity to be responsible for a number of state failings. The state has moved slowly in developing the requisite regulation and legalisation, this is compounded by a lack of capacity to monitor operators and implement local content requirements. This insufficient capacity for regulating and monitoring can also be seen in education and training, where the state's lack of intervention has perpetuated the teaching of many irrelevant and unaccredited courses (or courses not accredited by recognised bodies). Beyond regulation, as we can observe in Chapter 7, proactive interventions to develop academic and vocational education capacity and to engender local supplier development have been hindered by an underfunded and technically incapacitated bureaucracy. As noted by an experienced international consultant, Uganda's development of academic and vocational capacity is comparatively very slow and that the progress that has been made could have been done in a much timelier manner. In the absence of an effective administration, we can observe that Pockets of Effectiveness are undeniably linked to donor interventions.

Meanwhile, despite the implementation of the Norwegian Model and emphasis on institutional quality, there are widespread reports of corrupt practices and evidence that the President demonstrates discretionary power. Although the prevalence of corruption and

discretionary decision making is not uncommon in underdeveloped and developing nations, the impact on the inclusive nature of local content can be substantial. The data suggests that many respondents are aware of non-inclusive practices around oil and gas. Uganda's bureaucracy is not separated from politics and this is evidenced in a number of ways, notably the fact that members of Museveni's family occupy elevated positions in government and the oil industry. Correspondingly it can be concluded that Uganda's bureaucracy is not separated from politics and lacks the administrative capacity to prevent unconstitutional and extra-legal practices within the government.

Research Finding 4: Donor agencies have proven a vital partner in developing local content, filling voids in funding, technical knowhow and administrative capacity

Corresponds to research question 2: What role are the leading stakeholders playing in local content development and adoption in Uganda and does the elaboration of this model differ between key corporations in the oil sector and other stakeholders in the local content landscape?

Western development aid on the African continent has experienced a legitimacy crisis over the past decade and longer, perhaps coinciding with the re-emergence of non-DAC donors. As highlighted by Bräutigam (2011), unlike the West, who often attach political conditions to their aid, the Chinese state gives aid and conducts business without imposing political preconditions but does require the recipient nation to contract Chinese companies. This has coincided with decreasing demand for western donor agencies' conventional offering of financial assistance; Polus and Tycholiz (2017) note that, as a result of substantial increases in Uganda's tax revenue, foreign aid, notably western aid, does not play such a role in balancing the budget as it did in the 1990s. Resultantly, the prevalence of the Chinese state over western donor agencies is very pronounced in Uganda. However, in contradiction to the notion of declining western donor influence, this study found the interventions of western development agencies to be critical in developing local content and actualising Ugandan local content objectives.

The increasing relevancy of donor interventions has proven essential in funding and guiding the development of Ugandan capacity; this has largely been achieved through the delivery of programmes to develop indigenous human capacity in a number of important and / or nascent sectors. Within oil and gas, the donor community has demonstrated an awareness of the industry's requirement for labour and been responsible for a considerable growth in requisite skills development. Whilst donor interventions were numerous prior to the oil price crash (Figure 21 - Chapter 5), the new level of relevancy is characterised by focused interventions to develop accredited vocational courses, numerous scholarships for indigenous peoples to undertake these courses, the provision of technical expertise to guide implementing bodies (if the implementing body is Ugandan) and an approach guided by consultation with industry stakeholders, notably the future employers and contractors of local content.

Respondents contended that stakeholders, notably operators, have become increasingly engaged with donors, which, in turn, has informed donor interventions and is responsible for improved and more relevant development outcomes. As such, pockets of effectiveness in this case study, are universally linked with donor interventions. The E4D/SOGA project is purely focused on oil and gas and resource industries in East Africa, however, the World Bank's 'Skills Development Project' and Enabel's support of 'Skilling Uganda' exist beyond oil and gas. Correspondingly, it appears to be the case that western donor agencies are finding renewed relevancy in supporting the development of local academic and vocational institutions in line with industry requirements and upskilling indigenous peoples.

These recent development interventions, which are delivering manifestly positive outcomes in requisite skills development, appear to reflect the growing prevalence of 'Smart Aid' (Joseph & Gillies, 2009) and 'Thinking and Working Politically'. The donors in question have primarily worked with relatively strong indigenous partners and have delivered, especially in the case of E4D/SOGA, a coordinated approach. Pockets of Effectiveness have largely developed as a result of previous donor interventions, forming 'legacy foundations' which, in turn, provides later donors with stronger partners, both in terms of institutional capacity in governance but also stronger academic and vocational institutions.

The donor interventions which are particularly relevant to this study have partnered with a mix of institutions, the World Bank operated through the MOES (with the provision of technical expertise) and UPIK, whilst E4D/SOGA and Enabel have worked directly with a number of private vocational and technical institutions, bypassing public institutions and potentially complex interactions with the GoU.

8.2 Theoretical Contributions

While this study's main contributions revolve around its empirical richness, it also builds upon existing theoretical constructs to deliver its own theoretical contributions. A key contribution revolves around the institutionalist construct of isomorphism, which can be observed in this case study and characterises the movement from the non-compliance model to the position we see today following the oil price crash. Isomorphism suggests firms would adopt similar ways of operating in response to a common stimulus and we can observe that in this thesis, although operators adopted more localised positions to varying degrees. The thesis also suggests that a fall in the oil price is more conducive to engendering isomorphism in the context of local content adoption than regulatory changes, which represents a form of coercive isomorphism. This is because the oil price drop impacted the profitability of the oil and gas industry, forcing firms to make changes in order to avoid sizeable losses. Meanwhile regulation was seemingly perceived as something that could be avoided.

This thesis also reinforces the institutionalist's rejection of spontaneous order in the context of resource endowed nations, highlighting that linkages, as espoused by Hirschman, do not form naturally but require an interventionist strategy. Noting institutionalist authors such as Chang (2001), who claimed that Hong Kong was possibly the only industrialised nation to achieve that status without substantial state involvement, the Ugandan oil industry is illustrative of the failures which occurred without centralised strategy. While the Ugandan state does not reflect the exemplar conventional 'developmental state', foreign states in the form of donor organisations have been central to developing Ugandan local

content in line with the Ugandan government's aims. The failures observed within education in this case study further challenge the anti-dirigisme which is embedded in neoliberal thought. As such, this thesis highlights both the failures of the market when interventionism is absent and the creation of pockets of effectiveness when interventionism is present. This finding reinforces the work of authors such as Mkandawire (2001), who suggested a more dynamic state can address challenges including market imperfections and failures.

Following on from the notion of dirigisme being a key part of transforming resource wealth into national wealth, this work builds upon existing literature concerning local content policy. While influential authors such as Tordo. et. al (2013) discussed only regulatory and legislative interventions, this research, through an institutionalist lens, highlights policy doesn't have to revolve solely around regulation. Further prescriptive works by organisations like the World Bank may consider the addition of interventionist approaches, such as the development or creation of training centres and academic programmes. These interventions would help build local capacity needed by key stakeholders to overcome failures within the labour market, with the end goal of creating a labour market that reflects industry requirements.

Furthermore, while this thesis does not reject neoliberal thought and the prescriptions of good governance and strong institutions arising from the Post-Washington Consensus (Williamson, 1990), it highlights that these alone are not sufficient for actualising envisaged local content objectives in the context of underdeveloped resource economies. In a similar vein, the research underlines the tripartite model for resource governance, known as the Norwegian model, can be undermined when institutional capacity is weak, mirroring the conclusions of Thurber. et. al. (2011). Museveni's discretionary power and penchant for micro-managing the sector's development has hindered the effective working of Uganda's institutions. As Thurber. et. al. (2011) suggest, institutional capacity can be diluted by the division of a single institution for oil and gas into three institutions.

8.3 Implications and Future Recommendations: The Case for Interventionist Governance

In this study, I have sought to address a number of research questions related to local content, its adoption and development. I believe that the above findings are important for informing future research into local content within business models as well as policy design, governance and interventions for developing indigenous capacity. Whilst there are a number of findings that are distinct and separate from each other, I believe that, underlying all these findings, is a strong commendation of interventionist governance as a vehicle to actualise local content objectives. Interventionism is strongly linked to the notion of the developmental state. Andrews and Nwapi (2018) conclude that it is difficult to apply the concept of the developmental state, which stems from East Asian examples in the 20th century, to Uganda in the context of its resource governance. The authors' policy-heavy research concludes mixed findings when considering whether Uganda's governance of its oil is developmental in orientation. I concur with the sentiment that Uganda's governance has not been entirely consistent with the concept of a developmental state and my findings suggest that the state could play a much more proactive role in developing Ugandan content in engendering greater value creation.

Those responsible for governing the sector should recognise that local content can be more than a matter of compliance for operators, the adoption of local content can represent a cost-efficient business model. It is clear from the study that operators, such as Tullow and Oranto (although more will be known about Oranto as they grow in Uganda), are keen to utilise local capacity whenever indigenous competencies meet industry requirements. Whilst, there is a significant body of literature that looks at policy development and regulatory comparisons between oil producing nations (as discussed in Chapter 2), there is little research concerning the role of a proactive, developmental state in developing local content. Even Andrews and Nwapi's (2018) aforementioned study gives no consideration for the role of the government in creating the requisite skills through state education, both academic and TVET, or through enterprise development initiatives. In the

case of Uganda, dynamic and effective interventions have universally been instigated by donor agencies, replicating the role a developmental state could play.

There are a number of areas where we can hypothesise the positive impact of greater government intervention. Firstly, a more proactive and capable state may have prioritised greater implementation of local content regulation but also a more interventionist approach to the education and training sector. My research findings highlight that universities and vocational institutions have struggled to provide courses relevant to the industry. Resultantly, vast numbers of students have graduated from Uganda's institutions over the past 15 years having embarked on courses supposedly related to the industry, yet very few of them have graduated with the requisite skills for the industry. Whilst the oil industry itself could have benefitted from greater indigenous capacity during the exploration phase, I contend that the real victims are the graduates themselves, who invested considerable time and money into their future, to find that the industry they intended for themselves required further certification and training; instead the limited number of permanent positions within the industry over the past 15 years appear to be occupied by "people from the other side", or in other words, those who were fortunate enough to be educated overseas. As such, greater regulation in education could have at least served to protect students from courses which were unlikely to benefit their careers.

A greater level of intervention could see the government restrict the number of institutions offering courses related to the industry, instead prioritising a small number of universities and vocational institute to become centres of excellence. The foundation of Sunmaker Oil & Gas Training Institute is a perfect example of how a well-guided and resourced programme can achieve a truly relevant offering in a very short period of time and demonstrates what might be achievable if a host government focuses resources on a singular institution or a few organisations. However, Uganda's experience with academic and vocational capacity development is progressional, with incremental development coming one after another across multiple institutions, frequently punctuated by considerable gaps in time. The prime example being UPIK, with curricula alignment and then accreditation following many years after the institution's founding. Almost 15 years after the discovery of

commercial quantities of oil and gas in Uganda, there is a plethora of institutes that offer courses which do not meet industry standards. Thanks to donor interventions and the international training institutes, we can observe that there are a small number of technical institutes that have relevant offerings for future oil and gas professionals.

In theorising why this has happened, a recurring theme from the research was that the government was “finding its feet”. It was noted that Uganda’s administration and Museveni’s technocrats lacked technical knowhow, and correspondingly, the government was cautious and has taken incremental steps with regards to governing the industry’s development; notably the implementation of regulation and legalisation. Coupled with the slow pace of developments in education and training, particularly around curricula alignment and international body accreditation, it is largely the case that free market forces have determined the direction of local content, at least until recent years.

Whilst there has been considerable writing concerning an administrative model for resource governance, notably the Norwegian Model which, through government institutions, is seen as vehicle to engender an inclusive oil industry, there is no such work concerning a model for interventionist approach to actualise local content development objectives. Furthermore, whilst geography is a determinant of the industry’s requirement for labour (offshore, onshore, pipeline required etc.), the industry’s labour demands and many procurement requirements are standardised throughout the world, partially due to the globalised nature of the industry but also a considerable adversity to risk. The considerable but not great scale of the labour requirement coupled with the specific certifications and accreditations required by the industry lends itself to a more controlled environment for education and training, with fewer, but better resourced institutions. As such, given the homogeneity of the industry’s demands for labour and in a number of areas of procurement, it seems logical that there should be a model for an interventionist state that prioritises academic and vocational skills development rather than waiting for the market for academic and vocational courses to align itself with industry requirements. A similar logic can be ap-

plied to supplier development, with a singular state run ‘business incubator’ arguably being preferable to a business incubator run out of the CSR branch of a major regional bank, which is the current state of affairs in Uganda.

8.3.1 The Future of Licence Proliferation in the Context of the Increasing Importance of Local Content

The research demonstrates that operators, who are responsible for undertaking major national development projects, have varying alignments to an important national objective, being local content. This raises the question as to whether host governments would be more willing to award licences to operators that have demonstrated a willingness to operate more locally in the past, rather than those, such as CNOOC, who’s core commitments are in conflict with local content objectives? Correspondingly, will we start to see companies like Oranto, an expanding African operator, and Tullow, an African-focused operator, expand further across the continent as a reflection of these operators’ alignment with heightened host government prioritisation of local content? Furthermore, whether the increasing importance of local content, coupled with the notion that some operators are more opposed to operating locally, will influence the future proliferation of exploration and production licences could be a topic of future research.

It is, of course, the case that local content is not the only consideration of a host government; notably with CNOOC, it is possible to observe resource exploitation as part of greater Sino-Ugandan relations which in turn is supposedly delivering on broader development objectives of the Ugandan nation, such as enhancing Uganda’s road and infrastructure network. We can also observe that Chinese SOEs appear successful in engaging Ugandan elites. Despite a host of negative consequences associated with Sino-Ugandan relations, most prominently indebtedness, academics such as Swilling (2019) note that it will not be easy to remove the factors that perpetuate the relationship’s existence, as China is familiar with neopatrimonial arrangements and adept at exploiting them. Although it should be noted that state-owned companies from other nations are equally adept at exploiting these arrangements.

Licences in Uganda were reportedly granted having considered full proposals from the operators which include how the companies proposed to localise their operations; although, as noted in Chapter 5 and 6, operators have been known to change their own localisation plan after the licence has been awarded. However, as contended throughout this thesis, local content has become of heightened importance to host nations throughout the period studied; it may now be the case that governments will look to appraise operator adoption of local content in other locations before licencing operators in their own country.

In the context of Tullow's ongoing business challenges, in part caused by the non-responsiveness of the GoU to field development plans, it may be an African operator, like Oranto, that benefits from the increasing importance governments attribute to local content. Other operators such as Eni are also reportedly committed to local content and its development, manifestations including the support of the Getenergy Field Ready project across the African continent. With regards to Eni, further research may be required to understand how a (partially) state owned operator can be suitably reactive to local content requirements in countries of operation.

8.3.2 Western Donors Becoming 'Relevant' Again

As noted earlier in this chapter and by Hickey & Izama (2017), the past two decades have seen the declining influence of traditional western donors in sub-Saharan Africa and the ascendancy of non-western partners, notably the Chinese state. In 2010, China was the biggest single investor in Uganda, reflecting trends across the continent. However, this study has demonstrated that western donor agencies can be very relevant to African development agendas and in this case, without undermining Museveni's ideal of Ugandan-led development. This notion is particularly current given that one of the world's largest IFIs, the European Bank for Reconstruction and Development, has announced its intention to become operational in sub-Saharan nations.

In Uganda, we can observe that donor led local capacity development initiatives, like those that we see in oil and gas, are being implemented across a number of other sectors, notably construction, hotels/tourism, manufacturing, and agro-processing; all of which

were highlighted by the GoU as sectors requiring intervention. This study is largely unaware of the effectiveness of interventions outside of oil and gas, with the exception of a number of comments to suggest that these interventions had been more successful in tourism, construction and manufacturing. However, given the considerable and growing African indebtedness to China and the relevancy of the western interventions noted in this study, it could be hypothesised that western donors may once again have primacy in the future; although this may be dependent on western nations improving relations with African elites and a worsening of Sino-African relations.

These interventions, in developing indigenous capacity, appear to be a positive development in western donor-recipient relations. The programmes allow for western donors to support market economies and, in theory, promote inclusive growth in line with their broad mandate, whilst, in contrast to the Structural Adjustment Programmes (SAPs), not dictate the direction of national development agendas. Given the frequency of graduate unemployment in Uganda and other sub-Saharan states such as Ghana, there is substantial scope for further interventions in capacity development and employability programmes on the continent. As non-traditional donors do not appear to be motivated to intervene in these areas, the further relevancy of OECD donors in sub-Saharan Africa may be defined by the success and longevity of capacity development initiatives.

8.4 Discussion: Local Content in Uganda in the Context of Covid-19

Beyond the effect of the lockdown on Ugandan local content development and the temporary closure of academic and vocational institutions, it is likely that Covid-19 will have major impact on the global oil industry, with Uganda being no exception. In the context of this study, it is entirely plausible that Covid-19 will prolong much lower oil prices; an article by McKinsey notes “demand for refined products is down at least 20 percent and has plunged refining into crisis. We think it will be two years at least before demand recovers, with the outlook for jet fuel particularly bleak” (McKinsey, May, 2020). As of June 2020, the average annual oil price for 2020 is actually lower than 2016, the year in which spot prices bottomed during the last oil price crash. Resultantly, the pressures related to the price of

oil are likely to remain particularly acute, perhaps further incentivising a localised business model and heightening the need for local participation amongst those governing the sector in light of reduced potential oil revenue. It may also be the case that lower oil prices will further delay Uganda's industry, as Uganda's heavy oil is likely to be 'closer to the floor' than other crudes.

Although probably more relevant to the industry globally rather than Uganda's still nascent sector, the oil price crash of 2014, which was substantially greater proportionally than the collapse of 2020, may have already engendered the resilience required to successfully navigate future price crashes. This study did note some movements towards more localised business models which are almost universally considered to be more cost-efficient and represents an approach which widens the variance between operational costs and revenue. As such, the notion that an IOC like Total, which has demonstrated it is less able to localise operations and arguably slower at adapting to market pressures, is balanced by the notion that the 'oil majors' have substantial cash reserves; an important factor for any business experiencing challenging periods. We can also see that an internationally operating NOC, like CNOOC, which harbours non-commercial objectives, such as providing jobs and contracts for Chinese people and companies, also appears less resilient to this renewed price pressure; although cost-efficiency challenges may also be countered by the notion that Chinese labour and services tend to be less expensive than western counterparts.

In the context of Uganda, we are unlikely to be able to observe the impact of Covid-19 on the oil industry and local content until the pandemic has passed, especially given the industry's non-operational state. It may be the case that this new price shock will reinforce the need to adopt a more localised model even further, however, particularly in the absence of any activity in 2020, it will be difficult to isolate the impact on maintenance procurement, which has largely been localised already, and vastly depleted operator workforces, which have also incrementally moved to a more localised position in the past 5 years.

Whilst an important factor, localisation is not necessarily the panacea to another oil price crash globally, other factors include geography and the maturity of the operation. An industry, such as that in the UK, which is largely localised, has the world's highest production costs due to the geography of oil reserves and the expensive technological inputs required to enhance recovery rates from mature wells, in addition to the relatively high cost of inputs on the British Isles and in Northern Europe. Nevertheless, as some barrels are switched off around the world as a result of Covid-19, localised industry's may be more resilient and avoid such a fate. Indeed, the impact of Covid-19 on local content adoption and development may be a future research topic, potentially reinforcing the findings of this thesis.

8.4.1 The Longevity of Museveni's Administration and Ugandan Oil

My research suggests that Museveni's administration has looked to develop Uganda's oil industry with the national interests at the core of their motivations, albeit rather entwined with the notion that prominent Ugandans will benefit the most, displaying clannism characteristics that are not dissimilar from Putin's Russia (Rutland, 2016). However, despite the best intentions, there is clearly a perception among Ugandans, both in this study and in the media, that Museveni's oil policy has not served the country well. Articles, such as that of Mwenda (2020) highlight this discontent, noting the faults of such assertive resource nationalism and an administration hellbent on not being cheated by its chosen operators. Resultantly, this hardliner approach has seen Uganda's oil industry substantially delayed, with Mwenda (2020) noting the GoU's insistence on not backing down in tax disputes with the companies it had to beg to come to Uganda in the first place despite the government already having negotiated very favourable production sharing agreements. Most manifestly, as a result of Museveni's approach to the industry, the Ugandan people are not seeing the benefits of the oil endowment which has been promised for many years and election after election. Despite winning a highly controversial election in January 2021, with the internet shut down on election week and troops positioned around Kampala, one

may begin to wonder if Museveni's management of Uganda's oil industry will hinder his ability to leverage the promise of 'his oil'²⁶ to extend his administration in the future.

8.5 Limitations of this Research

As is clear from Chapter 6, isolating the impact of the oil price crash on local content adoption and development is not an exact science, especially given the slow progress of Uganda's oil industry towards production. With regards to generalisability and the implications of this research for other nascent oil and gas economies, it is perhaps the case that there are less and less frontiers of oil and gas. When the research for this thesis commenced, it was seemingly the case that Kenya may be one of the countries that would follow in Uganda's footsteps, however, it is now the case that Kenya is producing oil, many years before Uganda is set to go onstream. It may be the case that very nascent industries like those found in Madagascar and Somalia may become oil and gas producers in the not-too-distant future and correspondingly the host governments could look to play a more proactive and interventionist role in local content development as suggested by this study's findings.

This research would have also benefitted from a greater understanding of the GoU's strategy for oil and gas industry. It is most certainly the case that even well-informed state employees were uncertain of the country's plan to move forward to production and resultantly it is difficult to draw conclusions around the exact causes of the delayed development project. Correspondingly, such information would have assisted in informing the study as to whether the GoU is delaying for unrelated political reasons, such as ensuring political adversaries don't benefit from the oil industry, or whether the GoU is genuinely invested in ensuring Ugandan capacity is sufficient before the industry moves forward. As demonstrated by Hickey and Izama (2017), discourse into the nature of Uganda's oil agreements and by extension understanding the industry's delay is perhaps best served by a political

²⁶ Dörrie & Schindwein (2016) note Museveni's use of reference to the resource wealth as 'his oil' and 'his money'

settlement theoretical framework, whilst this study's investigation into local content and its development is better served by institutional political economy theory.

Finally, this research is subject to the conventional criticisms of single case study research. Criticisms normally centre around the concept of external validity or generalisability as the political, social and economic context of a case in question may bear little resemblance to another case. For example, with regards to this case study, the exact operator landscape in Uganda is not replicated anywhere else in the world. However, I am confident that the findings of this study are generalisable even when the operator landscape is very different as this research focuses on a common challenge in nascent oil and gas economies, moving from little or no indigenous capacity to a highly localised industry.

8.6 Final Thoughts

Instead of local content being a highly politicised concept, often pitting host governments against its operators, this study demonstrates that stakeholders can share the objective of a more localised industry. Whilst theoretical research on the topic can be illuminating, I believe greater attention should be given to the vehicles which can transform a nascent oil and gas industry into a localised one. I also contend that Museveni's administration has approached the industry with a degree of nationalism which is appropriate to develop greater linkages from the oil industry into the wider economy, however, the progress of the industry, parallel to the development of local capacity, represents somewhat of a national embarrassment. In the same sense that international expertise were required to explore and develop Uganda's oil industry, international expertise could have been better deployed to assist in governing the sector and managing the timely development of local content on behalf of a government which has been incapacitated in many areas.

I would like to further this research by exploring what a more interventionist approach to local content would look like. I believe this research provides a strong commendation for a developmental state approach in order to actually the objective of a localised oil industry and I believe it would be valuable to demonstrate the mechanisms through which this can

be achieved. From the perspective of a host government, this study has highlighted the vast inefficiencies of a largely free market for education and training, resulting in many cohorts of students graduating with few of the required skills, in turn being unfavourable for both the graduate and the potential employer; a similar challenge has been seen in enterprise development. The proposed study may also allow for the more practical results of this study to be synthesized into more actionable data.

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iii. Appendices

Figure 1: Participant Information Sheet / Informed Consent Form

The Open University,
Walton Hall,
MK7 6AA,
United Kingdom



Participant Information Sheet / Informed Consent Form

Study Title

An Exploration of Ugandan Local Content Development in the New Oil and Gas Operating Environment

Invitation paragraph

I would like to invite you to take part in a research study. Before you decide you need to understand why the research is being done and what it would involve for you. Please take time to read the following information carefully. Ask questions if anything you read is not clear or would like more information. Take time to decide whether or not to take part.

What is the purpose of the study?

This study intends to understand how local / national content objectives are being achieved in the “new oil and gas operating environment”. The study contends that a new international oil and gas operating environment, characterised by less stable market prices and the on-going politicisation of oil supply, has engendered a new operating model whereby oil and gas operators pursue local content objectives as an efficient business model and not as a compliance matter. As recent as 2016, literature noted and suggested that the fulfilment of local content obligations had been somewhat of a Corporate Social Responsibility (CSR) matter for operators. This study was designed to test whether this perennial paradigm of minimal compliance has given way to a new, localised global oil industry and understand how this new paradigm plays out in a nascent hydrocarbon producing economy.

As such, we must now look to view the development of local / national content through a new lens, one where we can observe two or more actors pursuing localisation objectives. Whilst government policies, programmes and initiatives have been observed considerably in existing literature, this new oil and gas operating environment suggests that governance can no longer be viewed in isolation. Instead, we must consider developments against the new paradigm of shared responsibility and collective goals. This research aims to understand how this new operating environment is manifesting itself in Uganda with regards to the development of local content and will be driven by the need to develop an understanding of the interconnectedness of operating companies, governments and other parties within this redefined political economy of the oil and gas industry.

There are many definitions of local / national content; this researcher contends that the definition can be refined to focus on three key criteria which will reduce ambiguity and challenges concerning measurability; these are employment, indigenous company participation and indirect employment.

What are the risks of my participation?

This research will not bring any physical discomforts to those partaking as respondents. Any personal or professional risk must be given careful consideration by the participants, however it should be noted that identifiable interview data will not be published without explicit consent.

What are the possible benefits of taking part?

We cannot promise the study will help you but the information we get from the study will help to increase the understanding of local content development in the new operating environment. In turn, this may benefit you or your work.

Will my taking part in the study be kept confidential?

Data collected from the interview stage will be kept anonymous for publication, unless you provide explicit consent that you wish to have your name associated with your comments. All data will be securely stored and will not be shared in its raw form with anyone. All data processing will be completed in accordance with European laws on data management (GDPR). The data processor (also the researcher) is compliant with GDPR practice. All raw data will be destroyed following the completion of the project.

Will I be compensated?

Unfortunately we cannot offer any compensation or remuneration for your participation.

Do I have to take part?

Your participation is entirely voluntary and you have the right to withdraw at any time. Refusal to participate will not result in a penalty or a loss of benefits to which the research participant may be entitled.

Who is organising or sponsoring the research?

This research is self-funded by the researcher in the pursuit of a doctoral degree from the Open University of the United Kingdom. The researcher is also affiliated with the Uganda Petroleum Institute in Kigumba.

What will happen to the results of the research study?

The results of this study will be published as part of the researchers PhD programme. You will not be identified in the report unless you have provided explicit consent to be identified.

As a participant you will be informed about all of the outcomes of the research by email or another preferred method of communication.

Has the study received approval from a Ugandan based Research Ethics Committee?

The research has been approved by the Makerere University School of Social Sciences REC.

Costs to the participant?

The researcher foresees no financial costs to research participants.

What is the procedure for withdrawing from the research?

If you wish to withdraw from the research, you are encouraged to contact the researcher or the research supervisor on the details provided below. You will be withdrawn from the research immediately and you will receive confirmation from the researcher accordingly.

How many individuals will participate in this study?

The researcher wishes to attract 80 participants to undertake the questionnaire, and 40 to take part in the interviews.

How long will the data be stored for?

Collected data will be stored for ten years by the Open University, before being reviewed for relevance and possibly destroyed. The unpublished data will be de-identified before storage.

Why have I been invited?

As an important stakeholder or observer in the development of local / national content in Uganda, you have been identified as a potential participant for this study.

Additional Comments:

This study has received the favourable opinion of the Open University (United Kingdom) Human Research Ethics Committee. Reference no. HREC/3130/Fox

Contact Details:

Name: James Fox

Email: james.fox@open.ac.uk

Number: +44 (0)7890797566

Title: PhD Researcher

Institution: Open University of the United Kingdom

Affiliated Ugandan Institution: Uganda Petroleum Institute - Kigumba

To contact me in Uganda, please contact me via WhatsApp on the UK number provided above

Or

Secondary Contact and Supervisor:

Name: Prof. Giles Mohan

Email: Giles.Mohan@open.ac.uk

Or

Name: Dr. Stella Neema

Title: Chairperson

Institution: Makerere University School of Social Science Research and Ethics Committee

Email: sheisim@yahoo.com

Number: +256 772 457 576

Figure 2: Research Consent Form: Interview

RESEARCH CONSENT FORM: INTERVIEW

Name of Researcher
James Fox
Title of study
<i>An Exploration of Ugandan Local Content Development in the New Oil and Gas Operating Environment</i>

Please read and complete this form carefully. If you are willing to participate in this study, ring the appropriate responses and sign and date the declaration at the end. If you do not understand anything and would like more information, please ask.

- I have had the research satisfactorily explained to me in verbal and / or written form by the researcher. **YES / NO**
- I understand that the research will involve: a semi-structured interview based on pre-discussed questions on the topic of local content development in Uganda **YES / NO**
- I understand that I may withdraw from this study at any time without having to give an explanation. This will not affect my future care or treatment. **YES / NO**
- I understand that all information about me will be treated in strict confidence and that I will not be named in any written work arising from this study. **YES / NO**
- I understand that any audiotape material of me will be used solely for research purposes and will be destroyed on completion of your research. **YES / NO**
- I understand that you will be discussing the progress of your research with others at The Open University **YES / NO**
- I understand that my responses will be stored in accordance with The Open University policy and GDPR and destroyed upon the completion of this research **YES / NO**

I freely give my consent to participate in this research study and have been given a copy of this form for my own information.

Name:

Signature:

Date:

At any point, should you wish to withdraw from this study, please contact:

Name: James Fox

Email: james.fox@open.ac.uk

Number: +44 (0)7890797566

Title: PhD Researcher

Institution: Open University of the United Kingdom

Affiliated Ugandan Institution: Uganda Petroleum Institute - Kigumba

To contact me in Uganda, please contact me via WhatsApp on the UK number provided above

Or

Secondary Contact and Supervisor:

Name: Prof. Giles Mohan

Email: Giles.Mohan@open.ac.uk

Or

Name: Dr. Stella Neema

Title: Chairperson

Institution: Makerere University School of Social Science Research and Ethics Committee

Email: sheisim@yahoo.com

Number: +256 772 457 576

Figure 3: Research Consent Form: Questionnaire

RESEARCH CONSENT FORM: QUESTIONNAIRE

Name of Researcher
James Fox
Title of study
<i>An Exploration of Ugandan Local Content Development in the New Oil and Gas Operating Environment</i>

Please read and complete this form carefully. If you are willing to participate in this study, ring the appropriate responses and sign and date the declaration at the end. If you do not understand anything and would like more information, please ask.

- I have had the research satisfactorily explained to me in verbal and / or written form by the researcher. **YES / NO**
- I understand that the research will involve a questionnaire using the Likert Scale composed of approximately 25 to 30 questions all questions related to local content development in Uganda. **YES / NO**
- I understand that I may withdraw from this study at any time without having to give an explanation. This will not affect my future care or treatment. **YES / NO**
- I understand that all information about me will be treated in strict confidence and that I will not be named in any written work arising from this study. **YES / NO**
- I understand that you will be discussing the progress of your research with others at The Open University **YES / NO**
- I understand that my responses will be stored in accordance with The Open University policy and GDPR and destroyed upon the completion of this research **YES / NO**

I freely give my consent to participate in this research study and have been given a copy of this form for my own information.

Name:

Signature:

Date:

At any point, should you wish to withdraw from this study, please contact:

Name: James Fox
Email: james.fox@open.ac.uk
Number: +44 (0)7890797566
Title: PhD Researcher
Institution: Open University of the United Kingdom
Affiliated Ugandan Institution: Uganda Petroleum Institute - Kigumba

To contact me in Uganda, please contact me via WhatsApp on the UK number provided above

Or

Secondary Contact and Supervisor:
Name: Prof. Giles Mohan
Email: Giles.Mohan@open.ac.uk

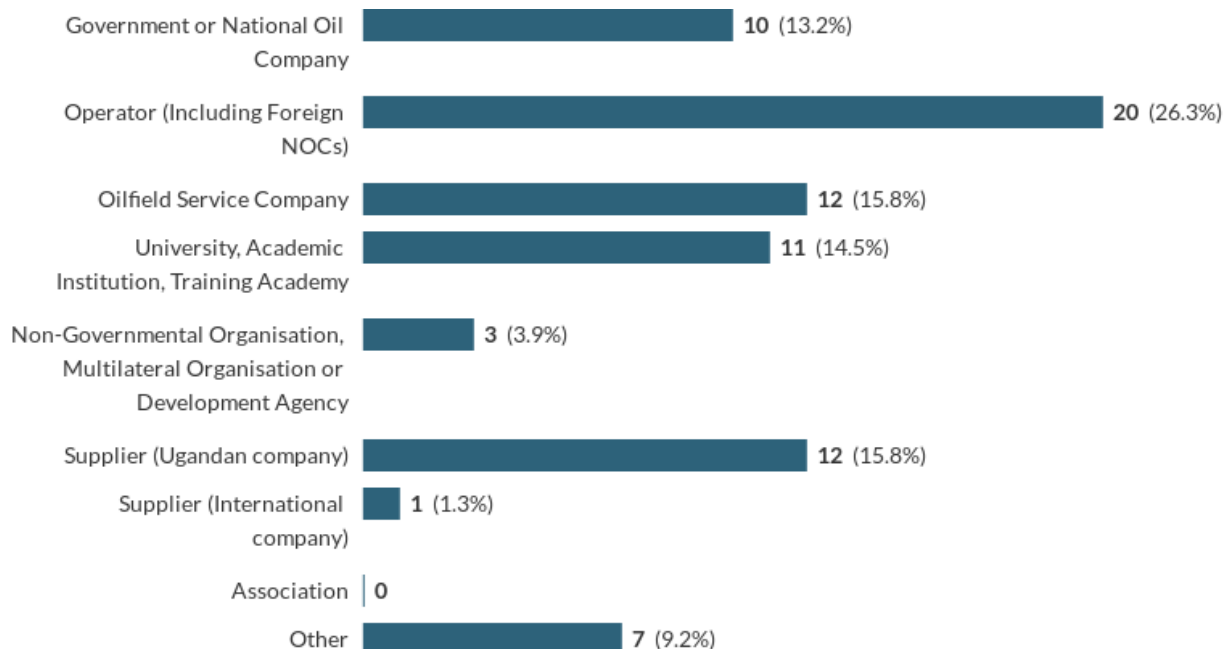
Or

Name: Dr. Stella Neema
Title: Chairperson
Institution: Makerere University School of Social Science Research and Ethics Committee
Email: sheisim@yahoo.com
Number: +256 772 457 576

Figure 4: Questionnaire 1, Data and Analysis

Survey Data:

1. Which of the below best describes your organisation?



2.1 There was very little workforce or supplier capacity in Uganda to support the development of an oil industry when commercial quantities of oil were found



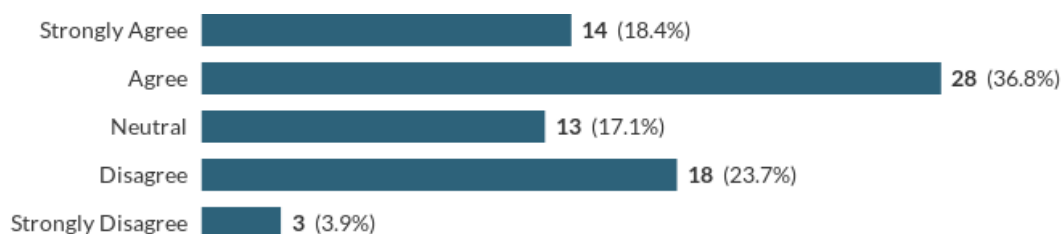
2.2. Employing nationals and procuring from local suppliers represents a cost efficient way of operating in Uganda



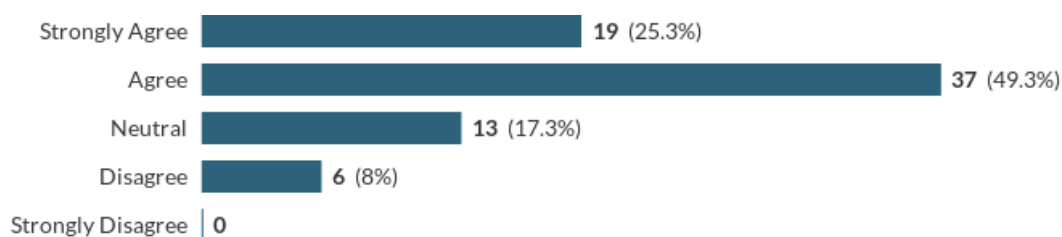
2.3 On average, expatriate workers are paid more than local workers in exploration and production



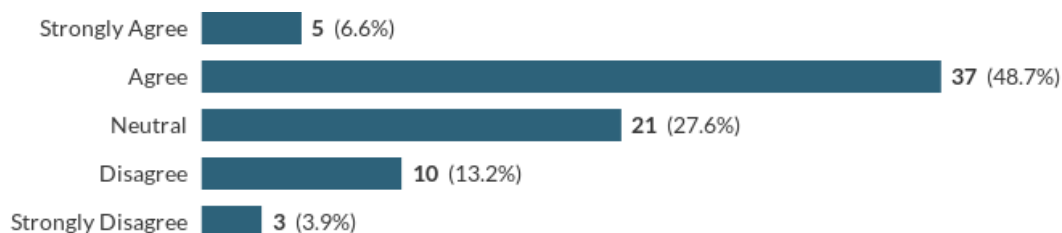
2.4 Operators are employing Ugandan nationals and procuring from the domestic supply chain only when it represents a cost effective business decision



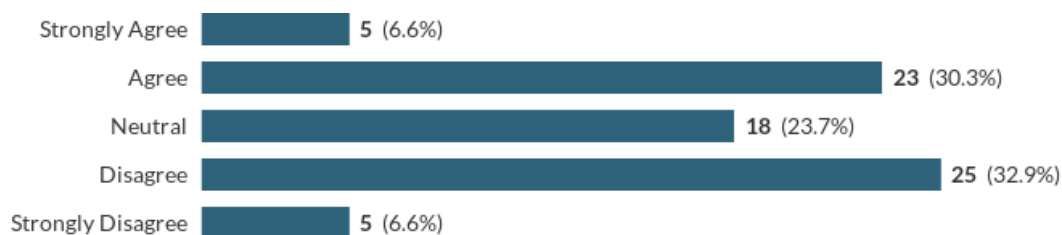
2.5 The oil price crash in 2014 has intensified the need to develop local competences in line with operator requirements



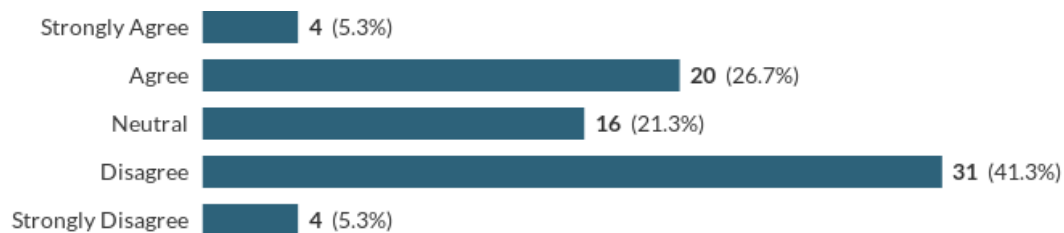
2.6 Operators have played a leading role in developing local competences (human and supplier)



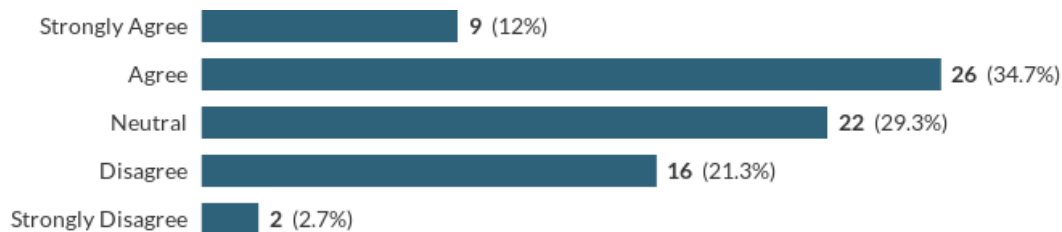
2.7 Operators and the government share the same objectives for local content development



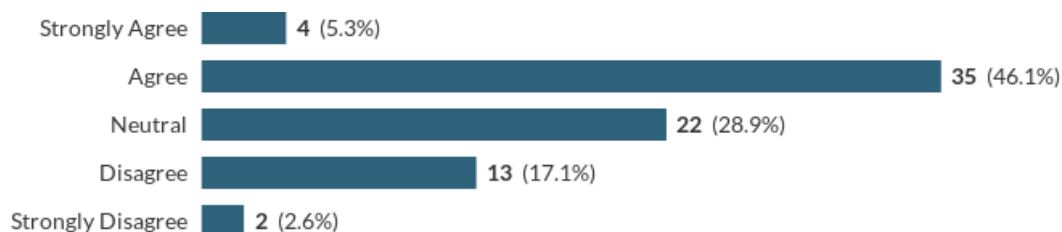
2.8 All operators are equally committed to local content development



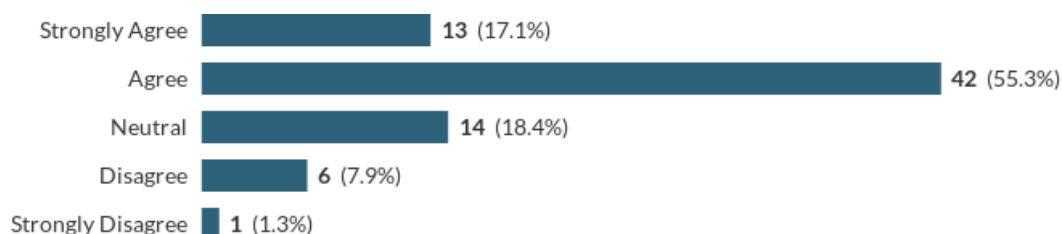
2.9 Operators have pooled resources (in clusters) to train / up-skill nationals and raise local capacity for education and training



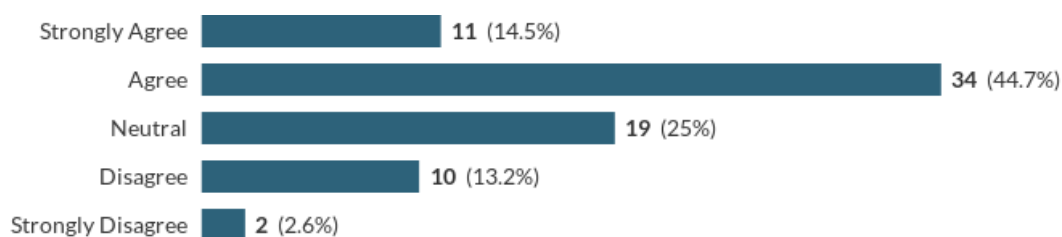
2.10 Operators have worked together to ensure local suppliers have the capacity to meet operator requirements



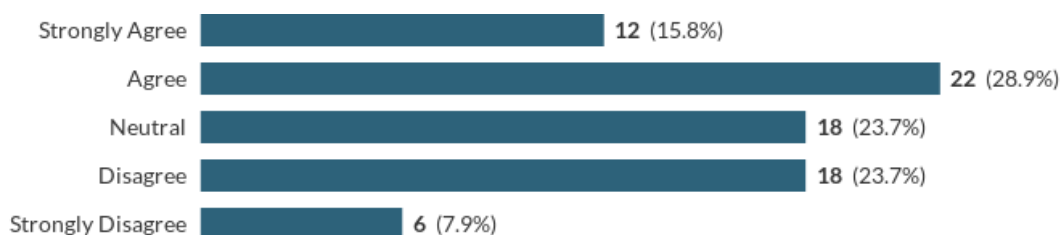
2.11 NGOs, Development Agencies and Multilateral Organisations (e.g. The World Bank, NORAD, GIZ, DFID) have played an integral role in the development of local content and capability



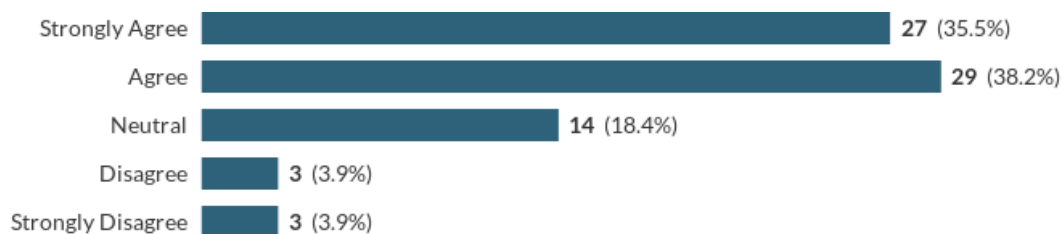
2.12 Uganda's administrative framework for the oil industry has been conducive to the adoption of local content



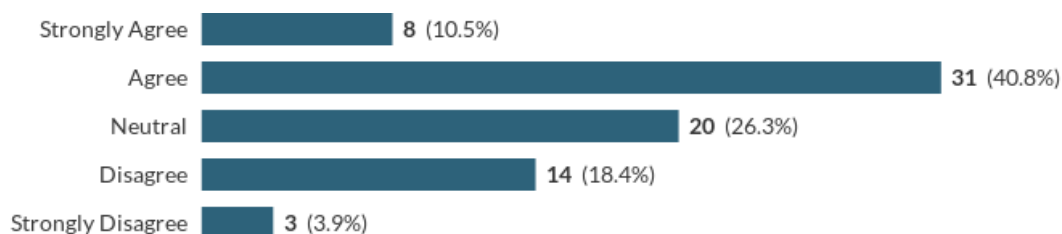
2.13 Uganda's political process has hindered the development of local content



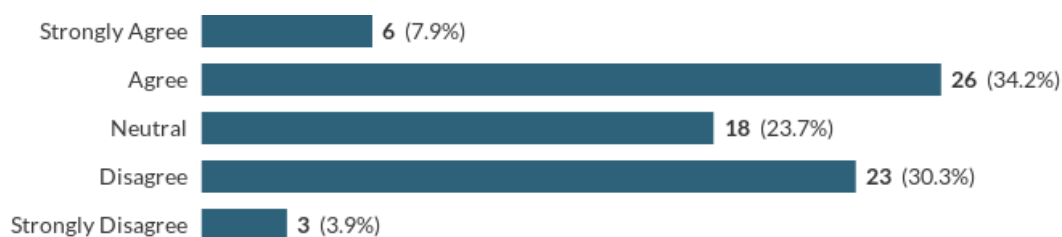
2.14 Operators can reject local suppliers when requirements cannot be met and seek international suppliers



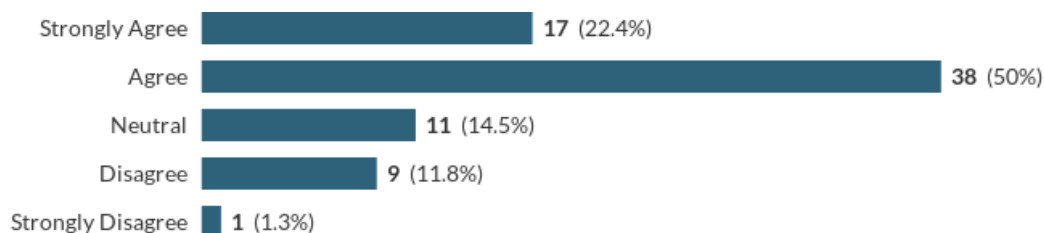
2.15 The executive body's (the President) prominent role in negotiations with operators has been effective in promoting local content



2.16 Operators have been the sole providers of the technical expertise guiding the development of local content in Uganda



2.17 Developing capacity to deliver business, technical and vocational education, and training for Uganda's oil and gas industry has reflected a multi-stakeholder approach



Questions with statistically significant results

Question	P Value
2.1 There was very little workforce or supplier capacity in Uganda to support the development of an oil industry when commercial quantities of oil were found	$P < 0.0001$
2.2 Employing nationals and procuring from local suppliers represents a cost efficient way of operating in Uganda	$P < 0.0001$
2.3 On average, expatriate workers are paid more than local workers in exploration and production	$P < 0.0001$
2.4 Operators are employing Ugandan nationals and procuring from the domestic supply chain only when it represents a cost effective business decision	$P = 0.0006$
2.5 The oil price crash in 2014 has intensified the need to develop local competences in line with operator requirements	$P < 0.0001$
2.6 Operators have played a leading role in developing local competences (human and supplier)	$P < 0.0001$
2.9 Operators have pooled resources (in clusters) to train / up-skill nationals and raise local capacity for education and training	$P = 0.0038$
2.10 Operators have worked together to ensure local suppliers have the capacity to meet operator requirements	$P < 0.0001$
2.11 NGOs, Development Agencies and Multilateral Organisations (e.g. The World Bank, NORAD, GIZ, DFID) have played an integral role in the development of local content and capability	$P < 0.0001$
2.12 Uganda's administrative framework for the oil industry has been conducive to the adoption of local content	$P < 0.0001$
2.14 Operators can reject local suppliers when requirements cannot be met and seek international suppliers	$P < 0.0001$
2.15 The executive body's (the President) prominent role in negotiations with operators has been effective in promoting local content	$P = 0.0004$

Question	P Value
2.17 Developing capacity to deliver business, technical and vocational education, and training for Uganda's oil and gas industry has reflected a multi-stakeholder approach	P < 0.0001

Questions without statistically significant results

Question	P Value
2.7 Operators and the government share the same objectives for local content development	P = 0.7423
2.8 All operators are equally committed to local content development	P = 0.0681
2.13 Uganda's political process has hindered the development of local content	P = 0.0975
2.16 Operators have been the sole providers of the technical expertise guiding the development of local content in Uganda	P = 0.3177

Similarities

In order to identify similarities in opinions the mode responses are presented to show the most frequently occurring responses to questions

1. Observing all participants' results, the following three questions resulted in the mode response of 'Strongly Agree'

Questions (Mode Response Strongly Agree)
2.1 There was very little workforce or supplier capacity in Uganda to support the development of an oil industry when commercial quantities of oil were found
2.2 Employing nationals and procuring from local suppliers represents a cost efficient way of operating in Uganda
2.3 On average, expatriate workers are paid more than local workers in exploration and production

2. Observing all participants' results, these 11 questions resulted in the mode response of 'Agree'

Questions (Mode Response Agree)
2.4 Operators are employing Ugandan nationals and procuring from the domestic supply chain only when it represents a cost effective business decision

Questions (Mode Response Agree)
2.5 The oil price crash in 2014 has intensified the need to develop local competences in line with operator requirements
2.6 Operators have played a leading role in developing local competences (human and supplier)
2.9 Operators have pooled resources (in clusters) to train / up-skill nationals and raise local capacity for education and training
2.10 Operators have worked together to ensure local suppliers have the capacity to meet operator requirements
2.11 NGOs, Development Agencies and Multilateral Organisations (e.g. The World Bank, NORAD, GIZ, DFID) have played an integral role in the development of local content and capability
2.12 Uganda's administrative framework for the oil industry has been conducive to the adoption of local content
2.13 Uganda's political process has hindered the development of local content
2.14 Operators can reject local suppliers when requirements cannot be met and seek international suppliers
2.15 The executive body's (the President) prominent role in negotiations with operators has been effective in promoting local content
2.16 Operators have been the sole providers of the technical expertise guiding the development of local content in Uganda

3. No questions returned a modal response on 'Neutral'

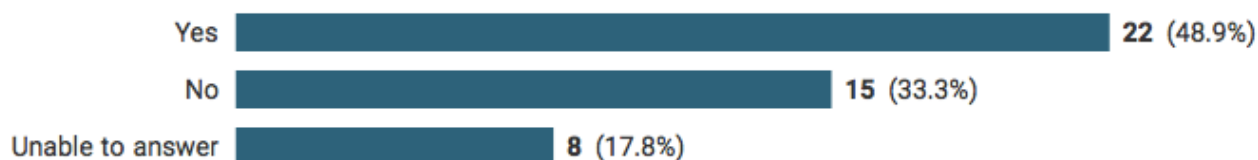
4. Observing all participants' results, these two questions resulted in the mode response of 'Disagree'

Questions (Mode Response Disagree)
2.7 Operators and the government share the same objectives for local content development
2.8 All operators are equally committed to local content development

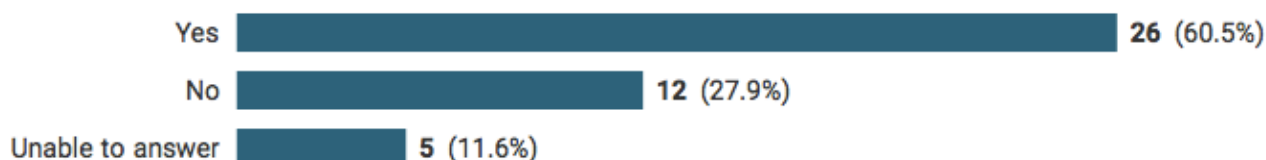
5. No questions returned a modal response on 'Strongly Disagree'

Figure 5: Questionnaire 2, Data and Analysis

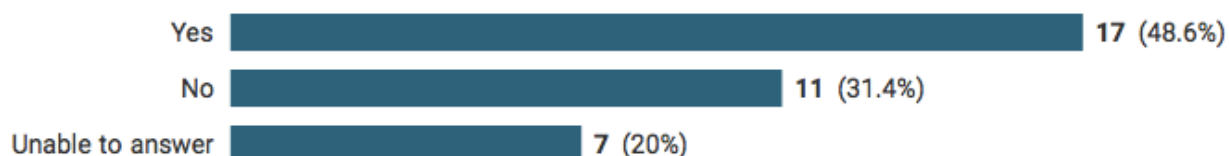
1. Do you believe that "fronting" is common practice in Uganda's oil and gas supply chain? Fronting: Using / establishing Ugandan companies in order to conceal the origins of goods or services produced by a foreign supplier.



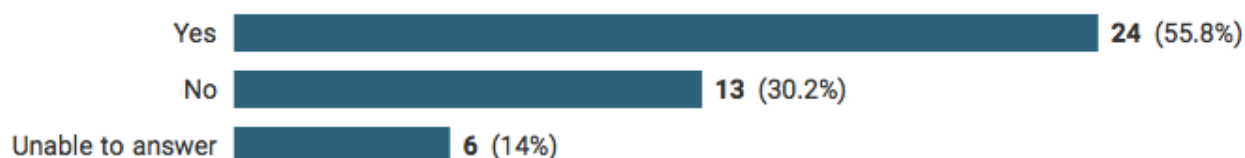
2. Does CNOOC have a preferential arrangement / relationship with the Ugandan government?



- 2a. If 'Yes' does this relationship allow CNOOC to flout (disregard / not adhere to) local content requirements?



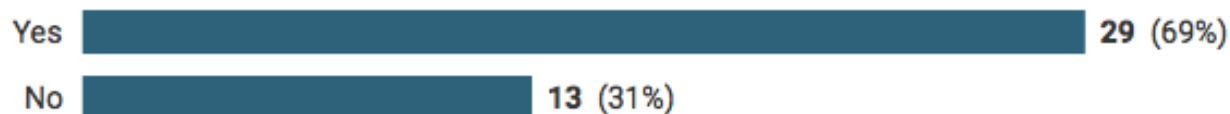
3. Sponsored programmes for education and training have fallen to Uganda's political elite and those connected with them?



4. CNOOC demonstrates a preference towards Chinese service companies?



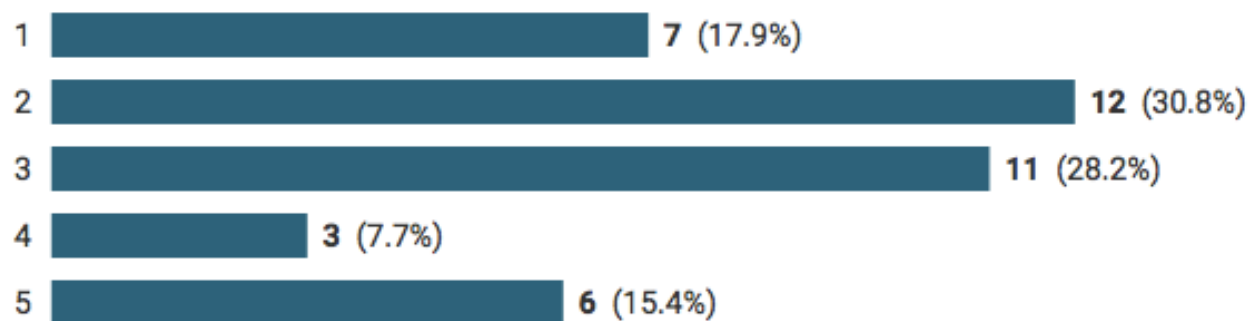
5. Total E&P demonstrates a preference towards French service companies?



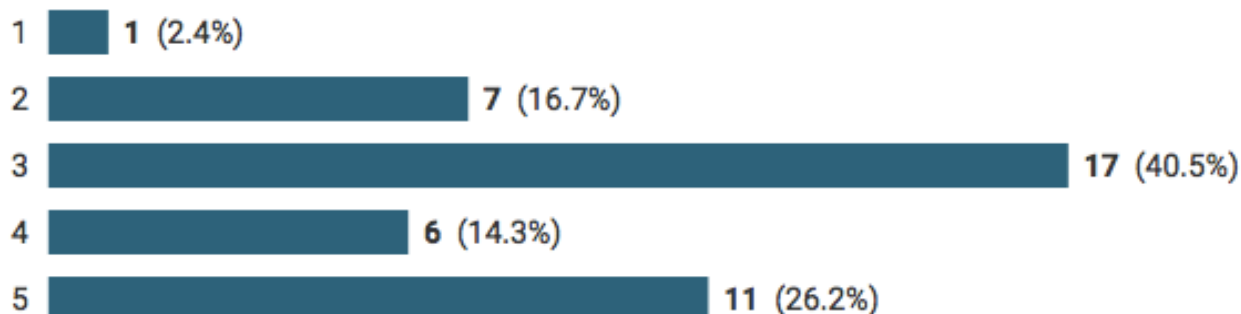
6. Tullow Oil demonstrated a preference towards British service companies?



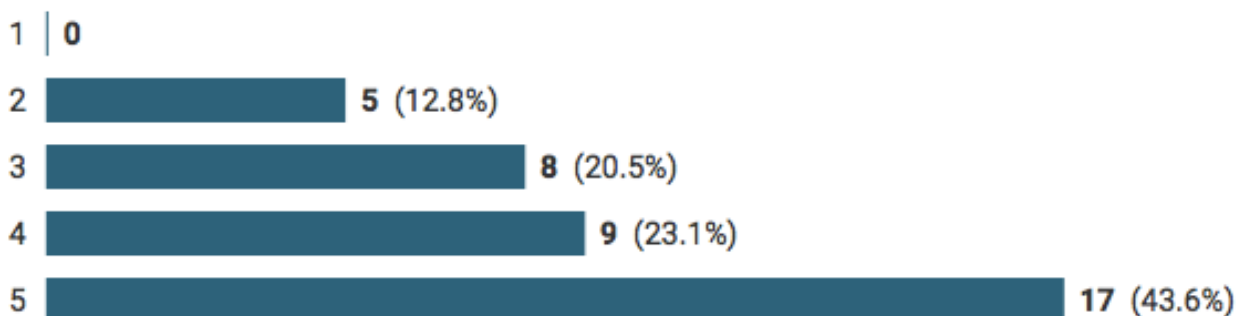
7.1 CNOOC: Commitment to employing local people (1 being not committed at all - 5 being totally committed) (average 2.71)



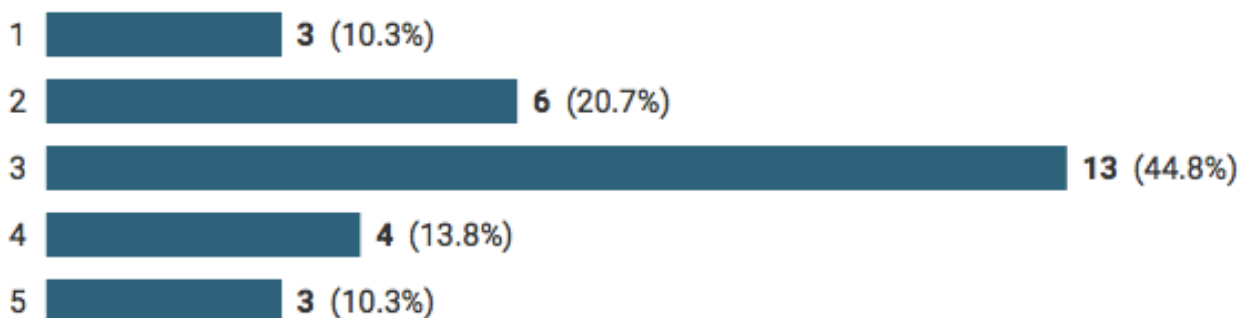
7.2 Total E&P: Commitment to employing local people (1 being not committed at all - 5 being totally committed) (average 3.45)



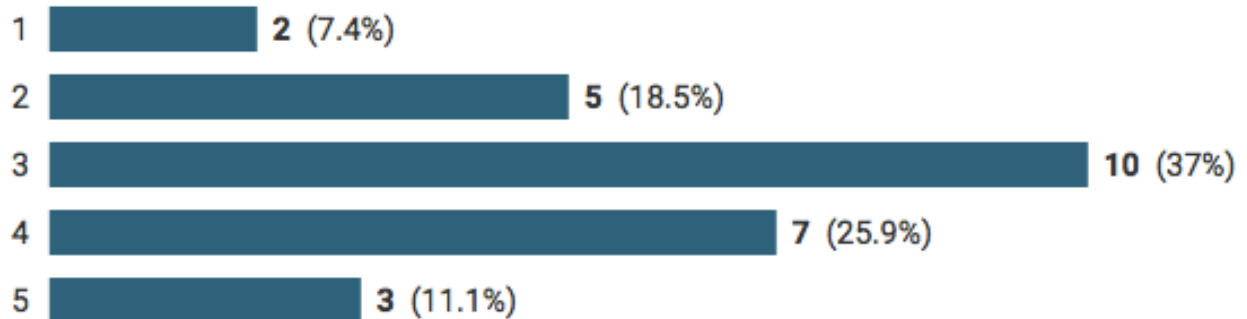
7.3 Tullow Oil: Commitment to employing local people (1 being not committed at all - 5 being totally committed) (average 3.97)



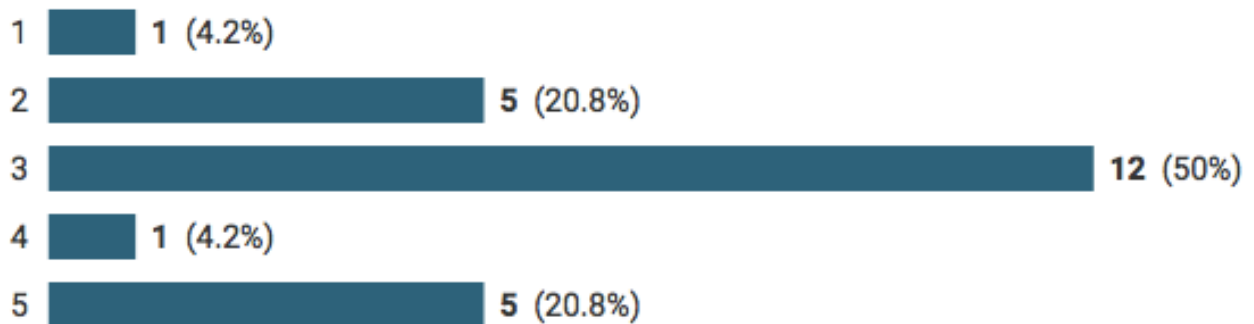
7.4 Oranto Petroleum: Commitment to employing local people (1 being not committed at all - 5 being totally committed) (average 2.79)



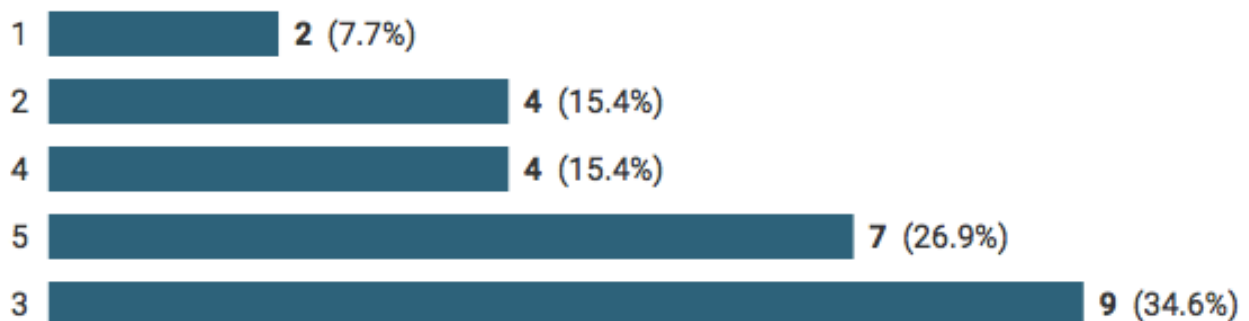
7.5 Armour Energy: Commitment to employing local people (1 being not committed at all - 5 being totally committed) (average 3.14)



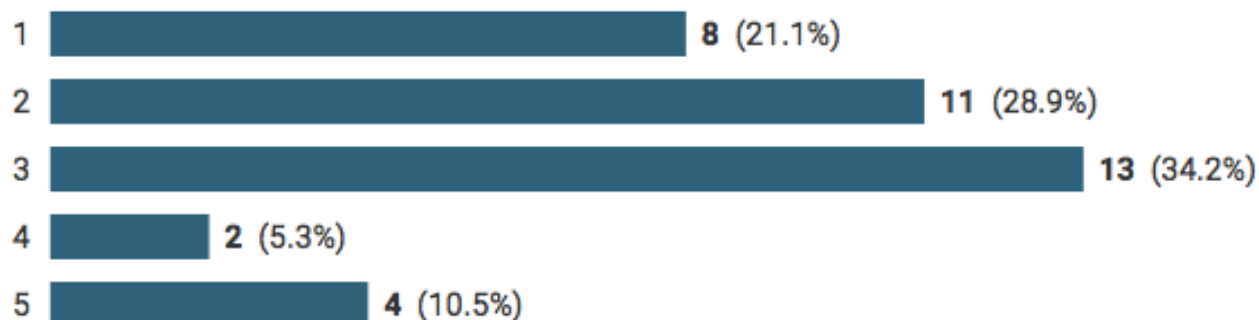
7.6 Hardman Oil and Gas: Commitment to employing local people (1 being not committed at all - 5 being totally committed) (average 3.12)



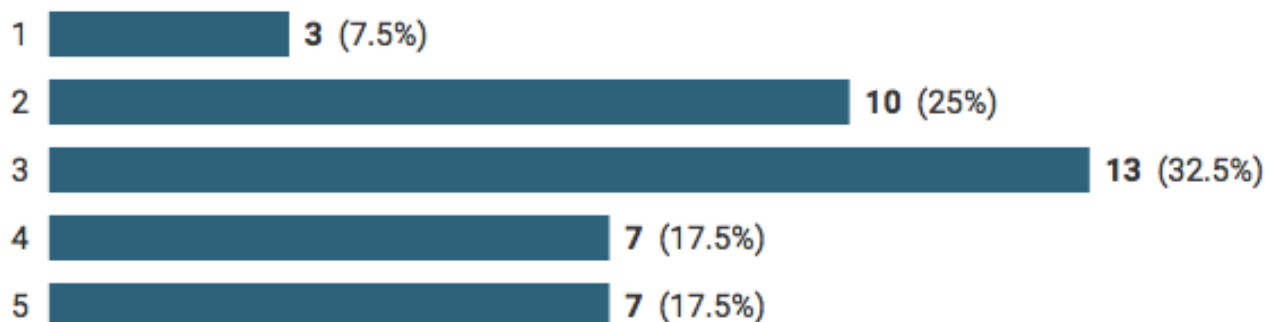
7.7 Heritage Oil: Commitment to employing local people (1 being not committed at all - 5 being totally committed) (average 3.38)



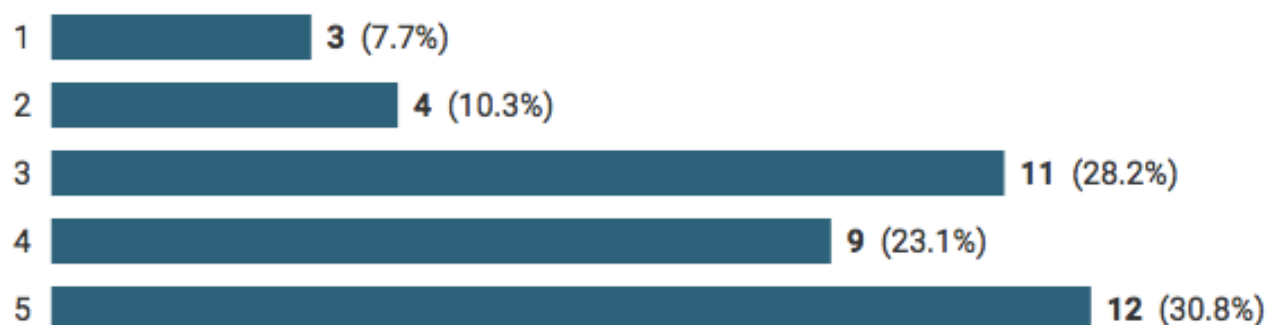
8.1 CNOOC: Commitment to contracting local service providers (1 being not committed at all - 5 being totally committed) (average 2.55)



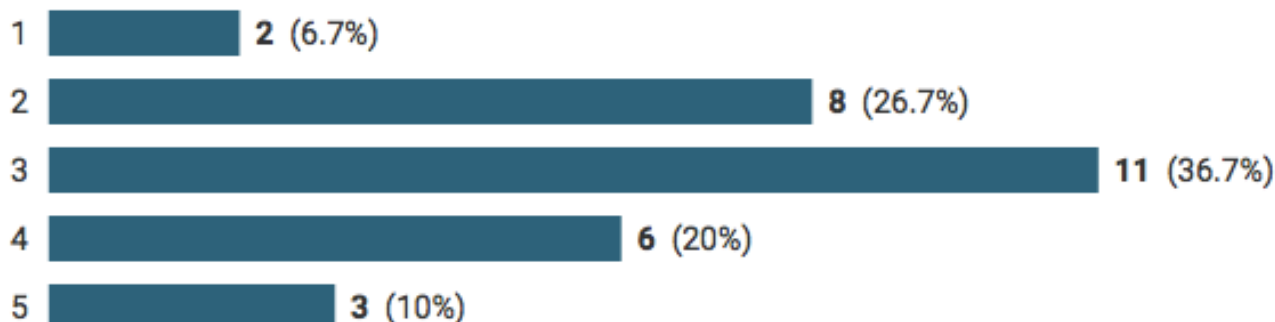
8.2 Total E&P: Commitment to contracting local service providers (1 being not committed at all - 5 being totally committed) (average 3.12)



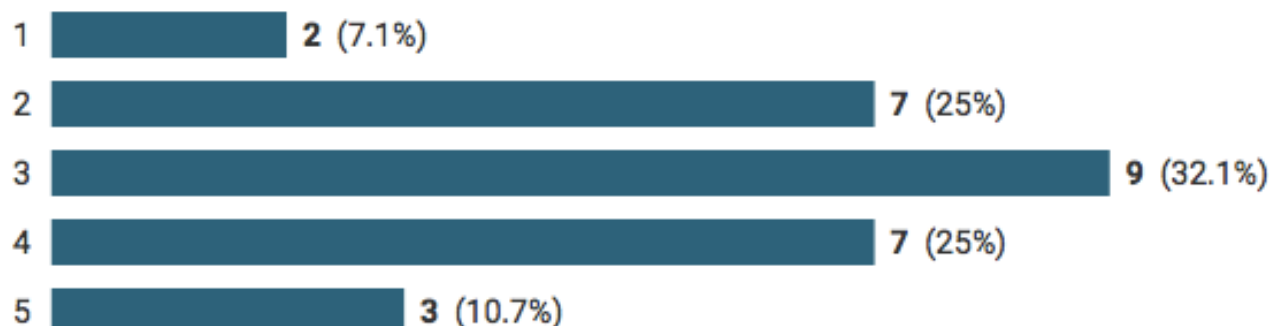
8.3 Tullow Oil: Commitment to contracting local service providers (1 being not committed at all - 5 being totally committed) (average 3.58)



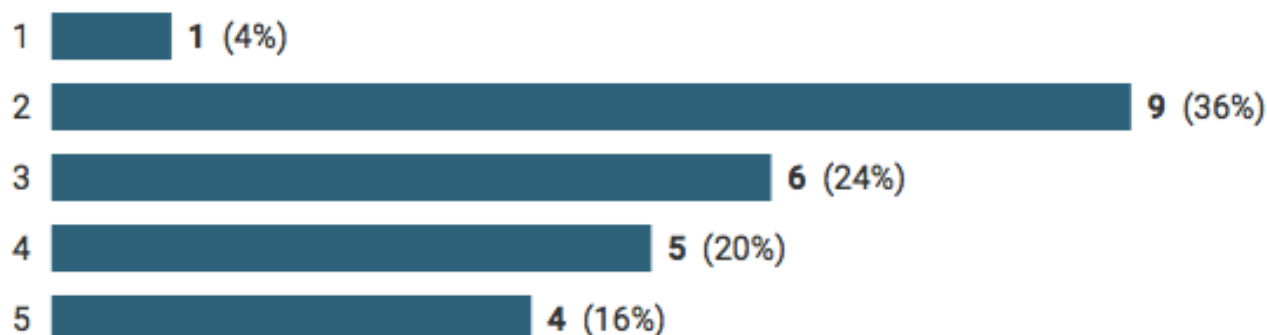
8.4 Oranto Petroleum: Commitment to contracting local service providers (1 being not committed at all - 5 being totally committed) (average 3)



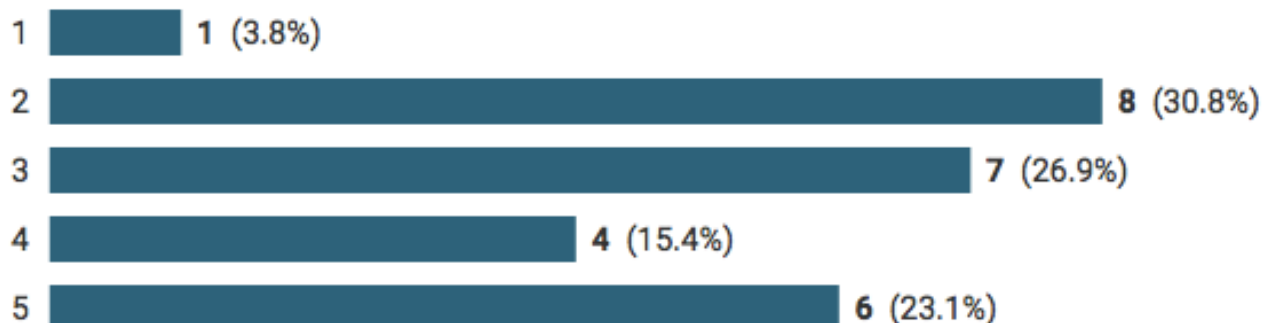
8.5 Armour Energy: Commitment to contracting local service providers (1 being not committed at all - 5 being totally committed) (average 2.92)



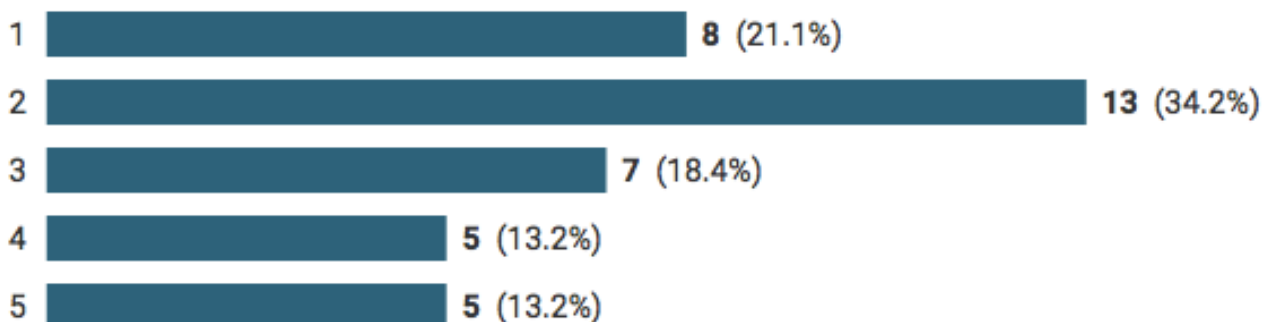
8.6 Hardman Oil and Gas: Commitment to contracting local service providers (1 being not committed at all - 5 being totally committed) (average 3.08)



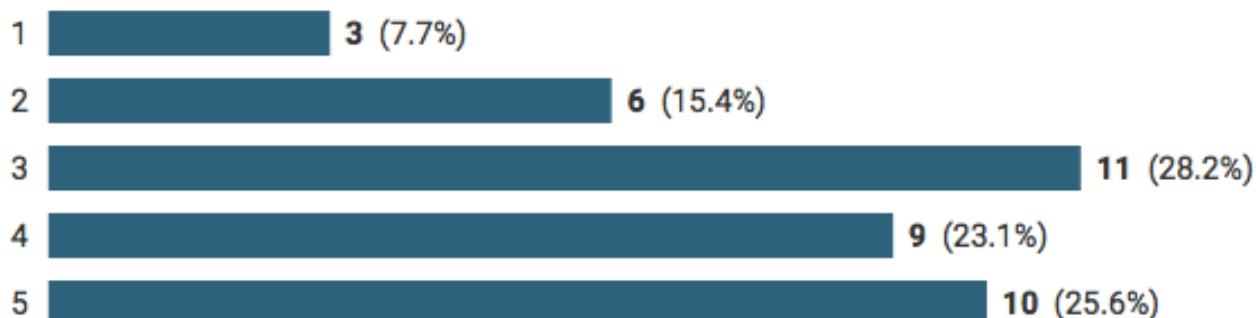
8.7 Heritage Oil: Commitment to contracting local service providers (1 being not committed at all - 5 being totally committed) (average 3.23)



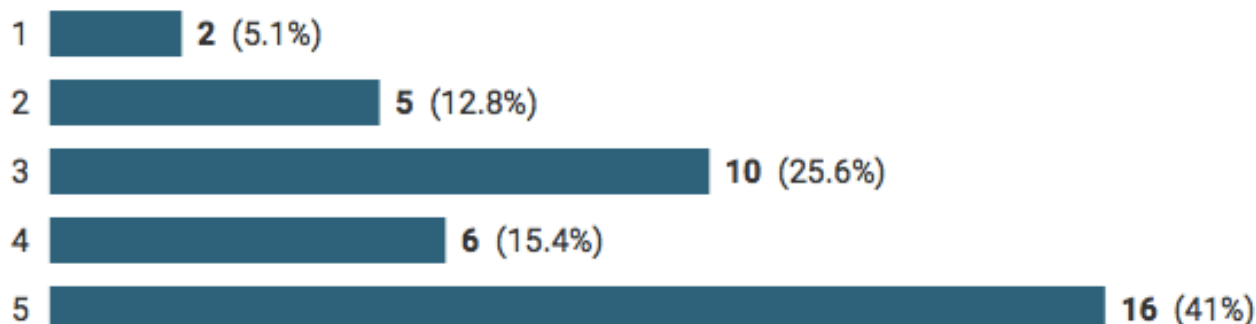
9.1 CNOOC: Commitment to developing / upskilling / training local people (1 being not committed at all - 5 being totally committed) (average 2.63)



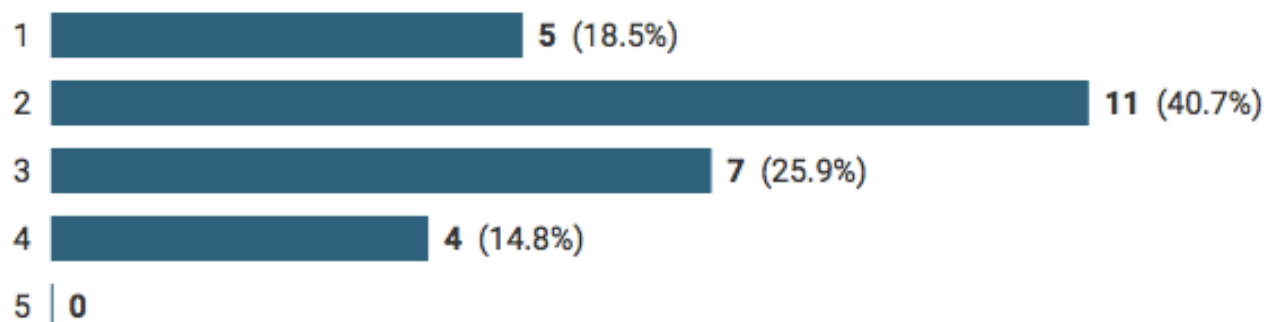
9.2 Total E&P: Commitment to developing / upskilling / training local people (1 being not committed at all - 5 being totally committed) (average 3.43)



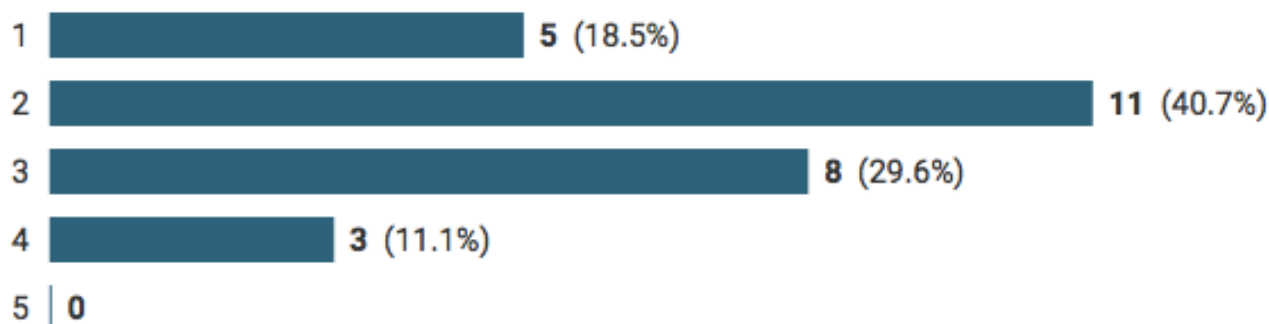
9.3 Tullow Oil: Commitment to developing / upskilling / training local people (1 being not committed at all - 5 being totally committed) (average 3.74)



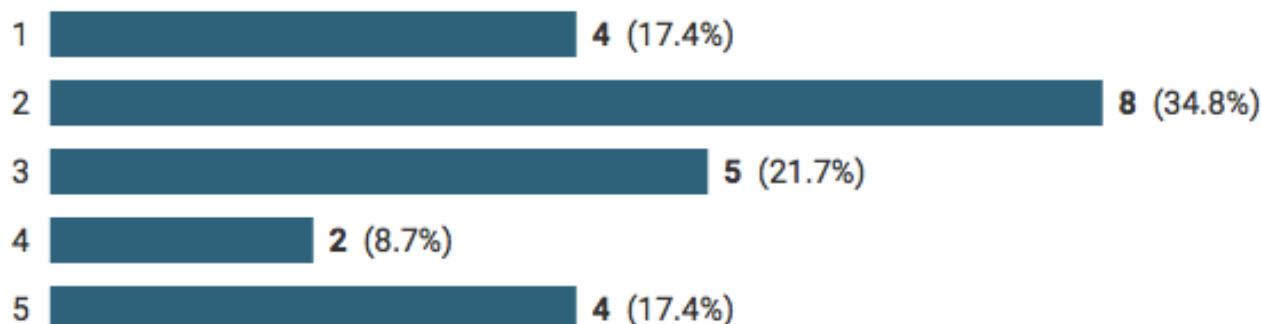
9.4 Oranto Petroleum: Commitment to developing / upskilling / training local people (1 being not committed at all - 5 being totally committed) (average 2.37)



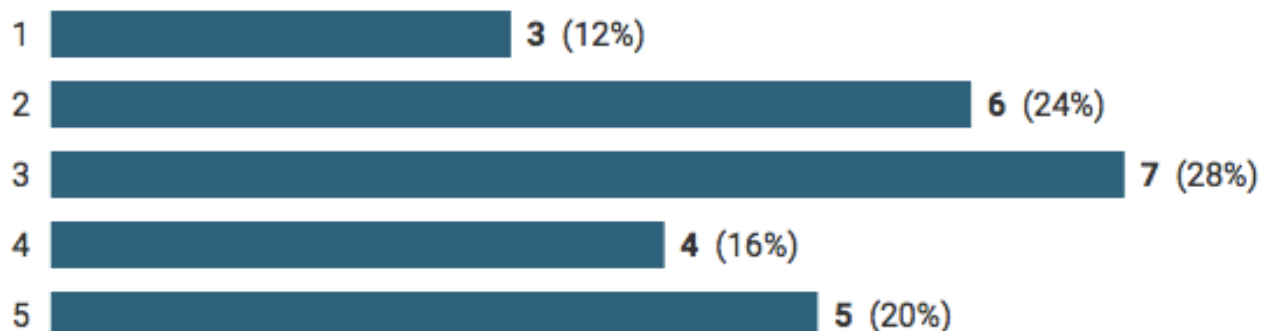
9.5 Armour Energy: Commitment to developing / upskilling / training local people (1 being not committed at all - 5 being totally committed) (average 2.33)



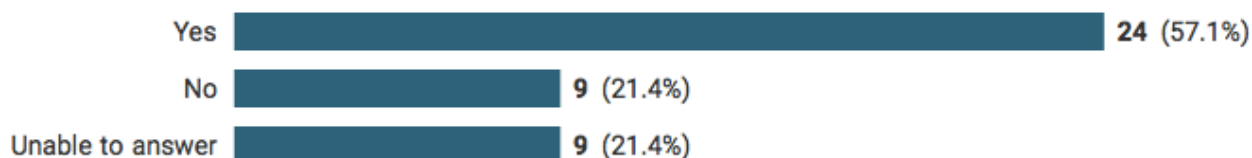
9.6 Hardman Oil and Gas: Commitment to developing / upskilling / training local people (1 being not committed at all - 5 being totally committed) (average 2.73)



9.7 Heritage Oil: Commitment to developing / upskilling / training local people (1 being not committed at all - 5 being totally committed) (average 3.08)



10. Have political elites captured the local content market for their own private gain? Rephrased: do political elites have a monopoly on the Ugandan oil and gas supply chain?



Interview Questions

Opening questions:

Could you tell me who you perceive to be the main stakeholders / actors in developing local content in Uganda

Operating Model:

Can you characterise the role of the operators in the development of local content?

How did the 2014 oil price crash effect the way operators approach local content in Uganda? If at all in your opinion.

How would you describe the business model of the operator community with regards to local content?

Can you comment on where operators could have done more to raise local capacity in both supplier competencies and people.

Do you believe that individual operator strategies have overlapped with other operators / oil field service providers in the country?

Roles:

How have operator and government roles differed in the development of local content?

Could you tell me more about the involvement of NGOs, Development Agencies and Multilateral Organisations

Can you tell me more about the remits of different stakeholders in local content development. Has one community of stakeholders been more responsible for technical expertise, education, training or financial considerations for example.

Do you believe that all operators have shown an equal level of commitment to local content development?

How would you characterise the role of government in the development of local content as a whole?

Political Economy:

What factors have hindered the development of indigenous capacity?

How has Uganda's political process effected the adoption of local content?

Can you tell me more about how Uganda's legislation and regulation have impacted the employment of Ugandan nationals in the oil industry

What is driving the Ugandan government strategy for local content?

What is driving the involvement of NGOs, Development Agencies and Multilateral Organisations?

Do you believe that the strategies of different stakeholder communities complement each other in raising local capacity, both human and supplier?

Multi-stakeholder environment outcomes:

Do you perceive there to be areas / sectors where this multi-stakeholder environment has failed to address local content concerns?

What have been the main barriers to achieving greater levels of local content?

Whose objectives have been met? If anyones?

Lessons Identified:

Does Uganda represent a unique case for local content development?

What lessons can be identified which may be applicable to other nascent oil producing nations?

Questions for young professionals:

How much information is available to you about reaching the standards required by operators / oil field service companies?

What is the government's role in Ugandans accessing jobs in the industry?

Could you tell me more about your preparation for work in the oil industry?

Do you foresee a long career in the Ugandan oil industry, or do you see yourself working elsewhere in the world?

Do you believe that your skills and competencies meet international standards?

Which community of stakeholders has supported your education most?

Do you perceive there to be any factors that may hinder your career development in this sector?

Questions for suppliers:

How much information is available to you about reaching the standards required by operators / oil field service companies?

Can you tell me more about preparing your companies to supply the oil industry, has there been assistance and from who?

Do you believe that Ugandan regulation and legislation adequately supports you over international competition?

Questions for educators:

What factors have hindered the development of your institution?

Which stakeholders have been present in ensuring your institution delivers for the oil industry?

How would you describe your relationship with the operator community / oil field services?